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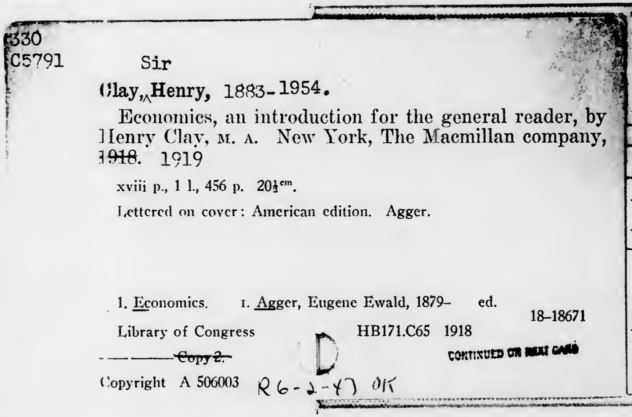

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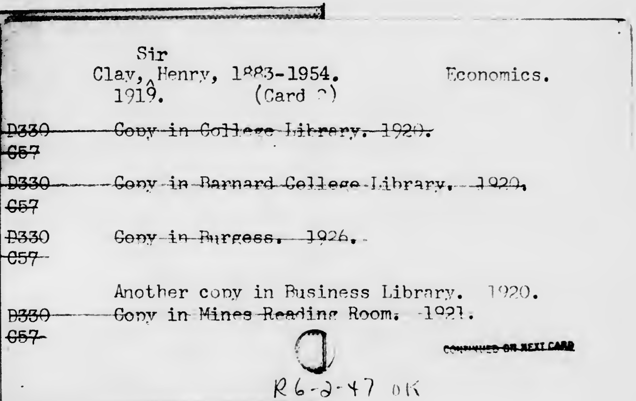

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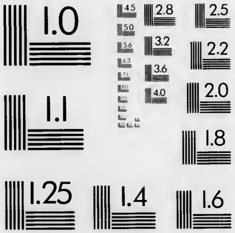

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ECONOMICS

AN INTRODUCTION FOR THE GENERAL READER

BY

HENRY CLAY, M.A.

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THE MACMILLAN COMPANY
1919

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TO

ALBERT MANSBRIDGE

PREFACE

An apology is needed for adding another to the large number of books that attempt to deal with the whole subject matter of Economics in a single volume. I offer two pleas in extenuation. The first is that nearly all existing introductions to the subject are intended primarily for the University student. The pious wish is generally expressed that they may be of use also to the general reader; but the general reader's special needs and opportunities are seldom borne in mind. His needs are different, inasmuch as he has not the guidance of a teacher and the leisure of the student; on the other hand, his opportunities are some compensation for these disadvantages, since he has usually a practical interest in the economic system and an experience of its working, which the academic student lacks. It seemed, therefore, worth while to try to do for the economic organization as a whole what Bagehot and Mr. Hartley Withers have done for a part of it, the credit system — to explain the principles of its construction and working in the language of ordinary life, and with reference to the experience and interests of the ordinary man. While it would need a Bagehot to succeed, I hope that the mere attempt will have done something to make it easier for the general reader to perceive the bearing of economic studies on the political and social problems in which he is interested.

My second plea is that existing introductions to Economics give the student too little help in applying its conclusions, since they give too little attention to the most interesting and important part of the subject, that, namely, where it borders on the allied studies of Politics and Ethics. The instinct which leads the working-man in discussions on economic questions to return constantly to the ethical aspect of them is a sound one, and Economics will gain rather than lose in authority by discarding its Mid-Victorian pose of the one and only science of society. No study of Economics, therefore, it seems to me, is worth making which does not include some consideration of the relation of the economic organization to political and ethical aims and standards; which does not, in other words, indicate what light Economics can throw on Ruskin's question, "What is Wealth?" Hitherto economists have tended to confine themselves to explaining how the economic organization works, postponing indefinitely the consideration of its political and ethical aspects; moralists, on the other hand, have applied their rules to the criticism of the economic organization without taking too much trouble to understand it first. The chapters of my book, therefore, dealing with the political and ethical aspects of the economic organization, which to some may seem irrelevant, seem to me to deal, however inadequately, with the most important section of economic studies; at the same time I hope that any moralist who may take up the book will read the first nineteen chapters first.

I am conscious that my first plea has lost much of its force by the publication of Dr. Cannan's *Wealth*, and my second by that of Mr. J. A. Hobson's *Work and Wealth*. Unfortunately for me, I did not know that these books were being written; they were not published until this book was almost completed, and I did not read them until it was quite completed. I trust that the importance of the subjects, and the differences in my treatment of them, will be considered sufficient to justify another book.

I wish to acknowledge my debt to previous writers. If I do not go beyond a general acknowledgment, it is due not to any wish to conceal an obligation, but solely to the impossibility, after seven years of teaching, of tracing to their

sources all conceptions and arguments that I owe to other writers. It is easier to assess one's indebtedness to friends. Professor D. H. Macgregor has helped me with many difficulties. Mr. R. H. Tawney and Mr. G. H. Thompson read my first draft of Chapters II to VI and XII and XIII, and helped me with their criticisms and suggestions. Mr. H. Sanderson Furniss read the whole of my manuscript with a care for which I cannot thank him sufficiently, and enabled me to remove a great many obscurities, errors, and other imperfections. My wife performed a similar service while the book was being written, and Mr. A. E. Zimmern when it was in proof. My thanks are due to the Tutorial Classes Committee of the University of Oxford for relieving me of lecturing work, and so enabling me to give the book the revision for which it had been waiting a year. And I thank, though they are too numerous to mention by name, all the members of my classes, who have allowed me to draw on their wide and diverse industrial experience, and have helped me with their criticisms of the views, my own and other people's, that I have put before them.

H. C.

PREFACE

THE outstanding characteristic of Henry Clay's *Economics for the General Reader* is its readableness. Beyond a certain point the involved questions of economic theory cannot be simplified. Some writers of economic textbooks seem to have supposed that condensation and simplification were synonymous terms; others have attempted to hide theory behind alluring description on the apparent assumption that the theory would be swallowed more or less unnoticed. Professor Clay, on the other hand, recognizes frankly that "economics" means "economics," but he has produced a unique book because in its preparation he bethought himself constantly of the needs of the general reader — the reader who can understand a clear presentation of what is clear in the author's own thought, but who wishes nevertheless to be relieved of the task of carrying in his mind a highly technical jargon or specialized nomenclature.

To begin with Professor Clay knows his economics. Secondly, his experience as a teacher has supplied him with fruitful suggestions of method and of illustration; thirdly, his capacity as a writer has enabled him to present what he has to say with delightful ease and clearness; lastly, his avoidance of unnecessary technical phraseology spares the general reader the anxiety and uncertainty that arise from a possible misinterpretation of unfamiliar terms.

Because of its obvious merits Professor Clay's book has already been adopted as a text by a number of college teachers of economics. But from the American point of view its drawback lay in the distinct appeal it was intended to make to a

British public. The illustrations, the criticisms of social and economic organization, the proposals for reform, etc., were all drawn from or intended to apply to British experience. It seemed wise, therefore, before introducing the book broadly to the American public, to have a special American edition prepared. In undertaking the preparation of this edition the undersigned wished, of course, despite some differences in view, to interfere as little as possible with the author's presentation. In no case, it is believed, has any change in theory or in general economic philosophy been introduced. English examples were replaced with American examples and concrete matter of purely British interest has been deleted. In several cases, however, where an English illustration seemed peculiarly apt or where it could not without substantial sacrifice be supplanted with an example drawn from American life, the original was left unchanged. It is hoped, therefore, that in this American edition Professor Clay's general plan has not been interfered with, and, indeed, that appreciation of it by the reader on this side of the water may, because of the revision, be enhanced.

EUGENE E. AGGER.

COLUMBIA UNIVERSITY,
MAY, 1918.

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ECONOMICS

ECONOMICS FOR THE GENERAL READER

CHAPTER I

INTRODUCTORY

I

The Scope and Subject Matter of Economics

Definition. — Economics is the study of business in its social aspect; the word " business " being used in its broadest sense, to cover all lawful ways of making a living. It will help us to reach a clear understanding of the scope and objects of the study if we take an example of the simplest kind of business transaction, and remind ourselves of the social arrangements which make the transaction possible.

Example of Modern Business. — We will take the purchase of a woolen shirt, the price of which is $2.50. We notice first of all that it is not made in the home, as it would have been a couple of generations ago; it is less trouble to buy it from an outfitter. The outfitter did not make it; he bought his stock of shirts from a shirt manufacturer, or possibly from a wholesaler who bought them from a manufacturer. When we say the shirt manufacturer " made " the shirts, however, we do not mean that he made the material of which the shirts are made; he may have done so, but more probably his business was confined to " making up " material which he bought from a jobbing-house or flannel manufacturer. From other merchants or manufacturers he would buy the thread, buttons, and material for collar-bands. The flannel manufacturer would use several kinds of yarn in making his flannel, and each of these yarns would be spun from several kinds of wool. The origin of the shirt, then, which we obtained by the simple process of handing $2.50 over a counter, is to be sought on the grazing lands of the West, on the sheep runs of Australia, and on the South American plains, where the wools were grown, in the cotton plantations of the South which supplied the raw material for the thread and collar-band and in New York and other centers where the buttons were made. In the course of its journey from the sheep's back to ours, the wool has probably traveled through three or four factories, through a dozen middlemen's hands and half round the globe. It is one item in the output of an organization, the woolen industry, the ramifications of which reach most parts of the civilized world.

The woolen industry was not the only organization involved in the production of the shirt, and necessary to its production on the modern system. Each of the factories through which the material passed required for its work on the material many machines, which in their turn required power to drive them. Several branches of the machinery and engineering industries were therefore involved in the making of this shirt; so were the iron and steel industries, which supplied the material of these machines; so were the oil and leather industries, since they supplied subsidiary materials. The coal industry was involved, because coal is the chief source of power; the building trades, because modern factories and warehouses have to be built specially for their work. The more important forms of transport were all of them employed in the making of this shirt, since its materials came from so many different quarters, and were shaped and put together in so many different places. The credit system was probably involved, since some of the firms that handled it would be dependent on assistance from banks to carry on their business, and the movement of raw materials is very largely financed by credit instruments. It would hardly be too much to say that the apparently simple transaction of purchasing a shirt was the completion of a process in which the modern economic system as a whole was involved.

Moreover, when we spoke of the parts of that system, manufacturers and merchants, transport agencies and the credit system, we were referring summarily and simply to things which in themselves are complex. The flannel manufacturer employs eleven or twelve different kinds of worker in four departments, even if he neither spins his own yarn nor dyes his own pieces; the clothier employs ten different kinds of worker on three or more different machines in five or more departments; transport agencies vary from the country carrier with a horse and cart to railway companies with 100,000 employees and $500,000,000 capital; even the merchant, who employs directly only half a dozen clerks in a modest office, may be the meeting-point and support of a network of trade connections covering a continent; even the outfitter's business requires an expert. The shirt, then, which we purchase with so little thought, is a product of the most complicated piece of social organization that mankind has yet devised. Our attempt to get behind the superficial simplicity of our business transactions has entangled us in a labyrinth, the paths of which lead into every social class, and has involved us in a study of a large part of the activities of the human race.

This system of social arrangements, the existence of which is revealed by the analysis of any business transaction, is the subject matter of Economics; it is the object of Economics to explain the arrangements in detail and to show how the system works. The example we have taken (and any other would have served as well) justifies the use of the word " system " At first sight the business world offers a spectacle of confusion rather than order. We found however that things did not happen *anyhow*. The materials of which our shirt was made could not have found their way from the place of origin, through all the processes of manufacture, to the outfitter's *by accident*. There was *order* in the process: the outfitter's shop, the shirt-maker and the other firms concerned were parts of a working system; our transaction was one of millions which depend on one another. Our glimpse of the working of the system gave the impression of a great automatic machine. The system is not a system like the political system, which has a sovereign directing authority. It is not the work of a single brain or the embodiment of a single purpose; it is a spontaneous organization, the outcome of actions which were not consciously directed to establishing or maintaining it. Hence, although we are parts of it, we can study it objectively, like a piece of external nature, and search for the principles of its structure and working as the physiologist searches for the principles of the structure and working of the human body. What points of contact this economic order has with the political order, and how far it harmonizes with the moral order, are questions we can ask when we have examined it and ascertained its principles.

Interest and Importance of Economics. — The example we took will illustrate also the interest and importance of Economics. Why was the shirt $2.50? Why did the outfitter charge us no more? How is it that we could not get it for less? Who gets our $2.50 and all the other dollars paid for shirts? In what proportions is the price divided among the different firms which handled the goods? and, within each firm, between operatives and employers? On what principles does this division take place? These are questions which every one tries to answer at some time or other, and Economics is only a systematic attempt to answer these and

related questions. How do the many firms which contribute to the making of the shirt manage to carry on between the time when they incur the expense of making the shirt and the time when the user pays for it? How are payments made in England and Australia for goods sent to the United States, and what difference do protective duties on imports into the United States make on the course of trade? What would be the effect on the price of shirts of a rise in wages, or a new tax on profits or rents? What would be the effect of applying minimum-wage acts to all the industries concerned in the making of a shirt? or of the formation of a " combine " of shirt-makers or flannel manufacturers? Is a " combine " probable in either of those industries? Under what conditions is an industry likely to be " trustified "? These are less obvious problems which our example presents — less obvious, but still the kind of questions that the investor, the trade union official, and every citizen who uses his vote intelligently is constantly being called upon to face; and all of them fall within one or other of the more important sections of Economics.

The system works; and even if we take its working for granted without inquiring how it works, its defects compel study. Unemployment, speculative gambling, waste and poverty, are results of it obvious to the most superficial observer. Are these evils inevitable? If they are, what advantages does the system offer to counterbalance them? if not, why are they there? Above all, what is one's personal responsibility in the face of these evils? Economics is the systematic study of these questions. *Some* study of Economics is at once a practical necessity and a moral obligation. And as a matter of fact everybody makes some such study, everybody at some time or other is a student of Economics, an economist; like M. Jourdain, who was surprised to learn that he spoke prose, the general reader may not have realized that he was an economist.

II

Relation of Economic Study to Business Experience

Economic Experience and Study. — Every one, then, makes some study, more or less casual or systematic, of the subject matter of Economics; and every adult has one important qualification for such study, namely experience. It is on the basis of their experience of the present economic system that people form their judgment on its problems; it is in their experience that they find the materials for answering such questions as arose from the example we took of an economic transaction.

Experience, however, while it is a qualification, and an essential qualification, for the study of economic problems, cannot be an adequate substitute for that specialized and systematic study of them which constitutes the science of Economics. It is easy to be familiar with a thing, and even to work with it, without understanding it. The locomotive engineer can do his work excellently without knowing anything of the science of thermo-dynamics, and most of us succeed in spending a lifetime with our bodies without acquiring any considerable knowledge of the science of human physiology; similarly a man may be a good business man and yet a bad economist. The experience which any one man, or even any one social class, gains of the economic system in the course of everyday life and work is limited. So far as it goes, it is a sound basis for economic judgments; but a thorough practical acquaintance with banking would not help a man much to understand the organization of a colliery, an intimate knowledge of the building trade would not fit a man to understand, either in their private or their social aspect, the operations of a cotton-exchange-broker. To find a secure basis for an understanding of the economic system it is necessary to bring together the experiences of all trades and occupations, of manual worker and industrial organizer, of private industry and government service, of housewife and producer; the experience of any individual or class is too limited to give by itself anything but a limited and partial insight into the system as a whole.

Instinctive Nature of Experience. — Moreover, the understanding of a system that a man gains from the experience of being a part of it is more of the nature of instinct than knowledge. It enables a man to judge and act; it does not enable him to explain always how he judges and why he acts. If forced to give an explanation, the explanation may be a wrong one; copybook maxims about industry and early rising have a suspiciously large place in the explanations given by self-made men of their success; luck and a lack of scruple, though at least as important, are never mentioned. Thus the experience of people actually engaged in industry has to be subjected to their own reflection and studied from outside, to be *analyzed*, before it can add anything to the body of knowledge which all may share who are willing to study; treated in that way it becomes the most valuable of all sources of knowledge.

Limitations of Experience. — Individual experience is limited and unconscious; it has to be supplemented by Economics for a more important reason. Its point of view is that of the individual, the point of view of Economics is that of society. Every business transaction has more than one aspect. The individuals who are parties to it are interested chiefly in its private aspect; Economics is concerned with its social aspect, which may be a different thing. From the point of view of the individual, profits are the difference between his expenses and his receipts; from the point of view of society, they are the incentive to, and the payment for, organizing work; the individual is concerned only with their amount, society with their origin and the extent to which they elicit and represent services to society. Speculation, from the point of view of the individual, is the act of buying at one time and selling at another, and is justified if the selling price exceeds the buying price; from the point of view of society, it is the process by which fluctuating supplies are adjusted to a fluctuating demand, and is justified (or the reverse) by its influence on price fluctuations. To the individual it may make little difference whether he increases his profits by higher prices on a smaller output or by a larger output at lower prices; society is keenly interested to learn under what circumstances the former method is likely to be adopted and under what circumstances the latter. There is the same difference between the two views as there is between the view of a town which a man gets from his street-door and the view he would get from an air-ship. No one, unfortunately, can lift himself into a position to take an "air-ship" view of society; so that the economist, and other students of society, have to construct their "air-ship" view of society by collecting, comparing and relating a large number of street-door views.

Importance of Social Viewpoint. — Economics, we have said, is the study of business in *its social aspect*, and the point of view is fundamental to the study. Business in its private aspect is so much a matter of personal character and accidental circumstances, that only a very small part of it can be reduced to rule or stated in systematic form. University courses and even degrees in "Commerce" can now be taken, but the study of Economics, as defined above, can help the future business man only by making him more interested in business and therefore more likely to devote his undivided energies to it. From the point of view of society's interests, however, it is very desirable that business men should study Economics, since it is to society's interest that they should reflect on and realize the social effects of their private actions. For the same reason that the private and the social aspects of business are so often different, a "government of business men" — if the phrase is intended to be understood in a narrow sense — would be a bad government. It would apply to the work of government standards and tests derived from private industry that are not applicable to public services; it might forget that it often "pays" a government to run a public service (such as sanitation or education) "at a loss."

III

The Method of Economics

The study, then, of our subject matter, in which every one at some time or another engages, can be supplemented with advantage by the specialized and systematic study of it, which we call Economics. The latter grows out of the former, the former is the best preparation for the latter. And the method of the unconscious and unsystematic study is the method, used deliberately and consciously, by which the systematic study reaches its conclusions. That method is — to reflect; to generalize on the basis of the known facts; in the light of the generalization to collect further facts with which to test it; and by this process of testing, and by comparison with other generalizations reached by the same process, to reach a generalization which exactly fits the facts. By this method any one who is forced by circumstances to frame an answer to some economic problem brings his experience and casually accumulated knowledge to bear upon it; by this method Economics seeks to reach and to state the principles of the present economic system.

Nature of Economic Theory. — Economic Theory is the body of generalizations so reached. The practical man is suspicious of "theory." His suspicion is justified, if "theory" is used as a substitute for ascertainable facts. But generalization, the making of theories, is unavoidable. Facts do not explain themselves. In some problems, the causes of trade fluctuations for example, the multitude of facts is so great that we cannot even begin to collect them unless we collect on some plan; we shall be overwhelmed if we do not take with us to the facts some coördinating idea; in other words if we do not frame a theory and take it to the facts to test it by them. On some important questions we cannot hope to enumerate *all* the ascertainable facts; if we wait to form our judgment on the influences that fix wages until we have examined all the ascertainable facts, we shall never form a judgment, their number is so great. On other problems some decision has to be reached for purposes of action, although facts are scarce or unobtainable; taxes are often based on theories which it has been impossible to verify, the collection of the taxes subsequently eliciting the facts that are needed to verify the theories.

Again facts may be contradictory, at any rate on the surface: it is a fact that the introduction of labor-saving machinery has on many occasions displaced labor; it is also a fact that the amount of labor-saving machinery in use has steadily increased for generations without being accompanied by any corresponding increase in the proportion of the population unemployed. Or the facts may bear more than one interpretation. There are several conflicting theories of wages, all of them "based on facts": for example, according to the theory on which English Poor Law policy is based, any subsidy to the wage-earner from the State will force wages down; according to the theory on which the feeding of school-children and old age pensions are based, State subsidies have no effect, or only a negligible effect; *some* facts can be found to support either theory. On the same foundation of facts different statesmen have based two entirely different fiscal policies in regard to foreign trade. Facts are seldom simple and usually complicated; theoretical analysis is needed to unravel the complications and interpret the facts before we can understand them.

Theory and Practice. — The practical man's objection to "theory" is a valuable protest against hasty generalization on an insufficient basis of fact or on an inadequate survey of available facts. But the opposition of "facts" and "theory" is a false one; their true relation is complementary. We cannot in practice consider a fact without relating it to other facts, and the relation is a theory. Facts by themselves are dumb; before they will tell us anything we have to arrange them, and the arrangement is a theory. Theory is simply the unavoidable arrangement and interpretation of facts, which gives us generalizations on which we can argue and act, in the place of a mass of disjointed particulars. What we are seeking in our study of economic problems, whether it is a conscious and systematic study or not, are principles. We want to know what, in the operations we observe, is the rule, what is the exception; why certain arrangements are as they are, and what will happen if we change them. Unrelated facts will not answer our questions; we want chains of facts, regularities, relations of cause and effect. We are seeking principles in order that we may act on them, because the ultimate motive of economic study is not curiosity, but the necessity to act, and rational action must be based on some principle. All arguments are based on principles, facts are of use only as they represent or illustrate principles. Economics, therefore, in order to discover the principles on which the present system is constructed and operates, surveys the facts of the system, arranges them, analyzes them, generalizes on the basis of them. Like every other science it advances by constantly discarding generalizations which newly discovered facts have revealed as unsound or inadequate, and devising new generalizations which will cover and explain the new facts.

Conscious and deliberate theorizing is necessary, because there is so much unconscious and haphazard theorizing. The man who opens a discussion by saying that he is going to "deal with facts not theories" does not mean that he is going to refrain from generalization; he usually means that he wishes to confine attention to a few facts that support his generalization, and to ignore all facts that conflict with it. The field of political controversy is strewn with hasty generalizations treated as if they were established truths, and used as the basis of argument. "Trade follows the flag," "Wages depend on the cost of living," "The present competitive system," are examples; and even more insidious are the theories of wages, profits, value, exchange, on which people base their judgment of economic problems without ever formulating them even to themselves. The time-honored "Law of Supply and Demand" has been misused so long to justify quiescence in the face of obvious evils that a natural reaction has led to the view that it can be ignored.

Individual Presuppositions and Theory. — One of the great difficulties of all study of which man and his activities are the subject matter is that the student, being himself part of the subject matter of the study, is likely to be influenced in his judgments by assumptions, based on interests and prejudices, of which he is unconscious. The danger is particularly great in the study of the economic system, and the most careful student can hardly hope to attain a perfectly impartial judgment. It is doubly important, therefore, that economic theorizing should be carried on "in the open," that the assumptions underlying economic policies should be brought to light, and the "views" (or unconscious theories) on which people in practice base their judgment of problems of wages, prices and other things, should be stated explicitly, in order that they may be critically examined. If everybody is, as has been said, an economist, certainly everybody has his own economic theories; if those theories are not formed by conscious and deliberate study, they will be based on a limited experience and on prejudices, interests, ideals, which mislead the judgment just because they are unsuspected. An incidental advantage of deliberate study is that it leads people to define their terms. Such words as Wealth, Value, Profits, Monopoly, Competition, Coöperation, can be used in more than one sense each, and the different senses are not distinguished clearly in ordinary conversation. Economics, by confining each word to a single sense, and defining that sense, makes progress in argument possible, and tends to prevent those lengthy controversies, so frequent in politics, which are lengthy only because the parties to them mean different things by the same words.

Complexity of Economics. — The twofold difficulty of handling the multitude of available facts and collecting additional facts, where relevant and decisive information is not already available, has produced a tendency to split up the subject matter of Economics into a large number of smaller studies. It has been possible by so doing to utilize more fully the collections of facts made by government departments, congressional commissions and private inquiries, to supplement them, and so to deal exhaustively with particular problems, such as unemployment and the minimum wage, or particular developments of industrial structure, such as the trust movement and coöperation. Recent work in Economics of this character has an immediate influence on social policy by indicating the need and method of particular reforms. Such inquiries, however, are supplementary to the study of the general characteristics of the economic system; they aid it, they do not make it unnecessary. The different problems are interdependent, and can only provisionally be treated as separate and independent. Wages cannot be considered without some consideration of profits and rent, combinations cannot be studied without considering the nature and effects of competition; the system of distribution is intimately bound up with the system of production. The secondary and less obvious results of changes, therefore, are often more important than the immediate and obvious results;

the reactions and repercussions of a new invention, or a piece of social legislation, or an innovation in business organization, may spread far beyond the immediate objects to which it is directed. The economic system, in fact, as our example showed, operates as a unity, although its unity may be made up of lesser unities; and the relation of one part to another, the bearing of one problem on another, and the secondary effects of a limited reform can be understood only by studying the system as a whole. Some such attempt to understand the system as a whole is, as a matter of fact, made by every one; society's economic arrangements so intimately affect the political organization of society and the moral life of the individual that it is hard to reach a decision on any broad political or moral question without incidentally judging the economic system.

Is Economics a Science? — The phrase, "a science of Economics," was used above. The claim of Economics to that description has been disputed. In the only sense of the word "science," however, that matters — the study of a group of problems, in which the solution of one assists in the solution of the others (J. Cook Wilson) — any study of society proves that Economics is a science. The objection is sometimes made that Economics cannot be a science because economists disagree. But doctors disagree, and no one denies that physiology and anatomy are sciences. There are disagreements in every science, yet in every science the advantages to be gained by specialized study have been proved by experience. Adam Smith is regarded as the founder of the science of Economics, because he perceived that there was a connection between different economic problems, and at the same time that economic phenomena were largely independent of the political arrangements with which, up to his time, they were usually studied. He displayed more clearly than had been done before the social coöperation which results from the pursuit of their private interests by individuals, and so

pointed the way to a specialized study of business in its social aspect.

IV

The Limits of Economics

Relation to Other Social Sciences. — This separateness and independence of economic phenomena must not be exaggerated. The immediate successors of Adam Smith, under the influence of *laissez-faire* ideals, did so exaggerate it, although Adam Smith himself put forward his economics as part of a general study of moral and political philosophy; it is well, therefore, to recognize at the outset the limits of Economics. / Economics is not a complete philosophy of society; it does not give a complete account even of that part of human conduct which it studies. The social relations to which business gives rise are the subject matter not only of Economics but also of the science of Politics, the study of social action in general, and of Ethics, the study of conduct in general. And Economics is the subordinate study of the three, because the problems of social practice to which its study is directed are seldom purely economic, and when it comes to action the ethical aspect is always, and the political aspect is usually, more important than the economic aspect. The study of the economic element in social and political problems is essential if they are to be solved, but few of them can be decided by purely economic considerations alone. /

An example or two will illustrate the distinction. The system of State regulation of industry and commerce known as the Mercantile System was condemned by Adam Smith, and shown by him to result in waste; yet he describes a part of the system, the Navigation Acts, as the wisest of all our commercial regulations, because he attributed English naval power to them and considered that the *political* principle that defense is more important than opulence overrode the economic consideration of waste. So an American to-day might support Protection and preferential tariffs on purely economic grounds, thinking that such a policy would strengthen and increase his country's trade; but he might advocate such a post-war policy for all the Allies, while believing that it would result in a net loss of wealth to all concerned, on the ground that it would knit them together against the Central Empires, and that such a *political* end was worth some *economic* sacrifice. A man may be a socialist on purely economic grounds, believing that an extension of State ownership would result in cheaper and better supplies; but he may believe that State ownership would result in some waste, and still advocate its extension on the *political* ground that so important an influence on life as the supply of the means of life should be democratically controlled, or on the *ethical* ground that competition as it works at present is immoral. So, again, a legal minimum wage, the public provision of better housing, or improved free education may be advocated on the economic ground that they would increase efficiency and, in the long run, more than pay for themselves; or on the ethical ground that society can afford them and ought to provide them, whether the result be economic loss or gain.

Or we may put the relation between Economics and Politics and Ethics in another way. In every problem there are two questions — What is? and What ought to be? The problem can be dealt with only when both are answered. Economics is concerned chiefly with the first; the second is (or should be) decided rather by a consideration of the political and ethical aspects of the problem, because our political and ethical opinions give us the *ends* of our actions. Where on political or ethical grounds two or more alternatives are admissible, then the economic end of cheapness, a maximum return for a minimum of expenditure, may decide. In practice society does not accept this principle in its full rigor, but compromises

between its ideals and cheapness; in democratic countries we rest content with an oligarchic organization of industry for fear of " drying up the springs of wealth," and in Christian countries we apply the doctrine of brotherly love to economic relations only within limits, for fear of being forced ourselves to rely for a livelihood on the brotherly love of others.

Object of Economics. — It should be noted that the object of Economics is not the advocacy of the present or of any other economic system, but explanation solely. In explaining, for example, that competition is the chief force controlling industry in the social interest, the economist is not saying that it ought to be, or that it is an ideal method of control. Explanation is not justification, a truth which the classical economists, in the excitement of discovering how the economic system worked, tended to forget.

Temporary Character of Conclusions. — Not only is Economics a subordinate study, but its conclusions have a temporary application only; they are not, like the conclusions of mathematics, true for all time and under all circumstances. This is so because they aim at giving a systematic explanation of the social arrangements by which man satisfies his wants, and these arrangements are temporary and conditional. They depend very largely on the state of the physical sciences; for any sudden increase in man's control over nature would be reflected in a changed social organization. The social effects of the discovery of the use of coal as a source of power, of cheap steel, of electric communications, warn us against any attempt to forecast the future simply on a basis of the study of existing economic arrangements. The arrangements depend also on the possibilities of human nature. A religious revival, which made the motives of the early disciples the dominant motives of society, would produce a sudden rearrangement of economic institutions; and a theory of distribution which gave a true account of incomes to-day would become suddenly false. Or a growth of civic patriotism, like that of the Athenians, would make possible economic arrangements which, as men are, would not work. Those economists who have approached the study of economic arrangements from the standpoint of psychology have concerned themselves more with measuring the strength of motives than with distinguishing and classifying the kinds of motives which actuate men in their economic relations and estimating their comparative importance. The latter is a field that needs exploration.

In emphasizing so strongly the limits of Economics we are not underrating its importance. We wish merely to guard against the confusions which invariably arise when some subject of everyday experience is subjected to scientific examination. The economist is constantly accused of saying that things *ought* to be as they are, when he merely points out that they are. On the other hand, where his authority is recognized, he is constantly quoted as the final authority on all social questions, whereas Economics is concerned with only one aspect of social questions. Though subordinate, Economics is not unimportant. In answering the first of the questions that face us in every social problem — the question What is? — Economics can give perhaps more help than any other study. The widely varying views of the nature of the economic system which are held by people who play an important part in working it are sufficient indication of the difficulty of the question. And it is as important as it is difficult. It is only by understanding the present system that we can make with a minimum of dislocation the transition to the different system which our political and ethical ideas dictate; and the less the dislocation which a social reform involves the less is the danger of reaction following the reform. There is no need, however, to emphasize further the importance of the economic aspect of social arrangements; everybody experiences it. And the economic end of cheapness or plenty is sufficiently important, even it if should not be allowed to

dominate the whole of life; while it should be kept in its place, it should never be forgotten.

Justification of Economics. — The advantage of isolating the economic aspects of society for separate study is that it conduces to clear thinking and a better understanding of the complexity of social relations. Its justification is the advance that has been made in the understanding of economic relations since Adam Smith made the study of them a separate science. In judicial procedure experience has taught the necessity of considering separately questions of fact and questions of law, although both are essential to the judgment; similarly in social study, it is a help to consider questions of economic fact and questions of moral right separately, although our action will be influenced by the two considerations jointly. The separation assists in the constructive handling of the mass of facts which bewilder us at our first attempt to discover the principles of the social organization. It prevents the confusion of thought and the argument at cross-purposes which inevitably result from the attempt to discuss *all* the aspects of a complicated question at once. Just as physiology, anatomy, and psychology study the same subject, man, from different points of view, so the social sciences, economics, ethics, politics, and law, study different aspects of the same subject, society. The method is simply an application of the common-sense principle, " One thing at a time." Specialization is as necessary in research as in industry; the progress of knowledge has been based on the same principle as the growth of the Roman Empire, *Divide et impera.* The method has its dangers, since aspects of a problem that can be separated for study cannot be separated for purposes of action; but the misuse of the conclusions of specialized study is no reason for giving up the study.

The following pages will not answer all the questions that have been raised in this chapter; considerations of space and the patience of readers forbid. What they attempt to do is to provide the general reader with a framework into which he can fit the facts and principles which he acquires in the course of his own experience, to put at his service some of the conceptions and lines of thought which students have found useful, and to introduce him to a systematic study of the more important questions which are raised by any attempt to understand present-day economic arrangements as a whole.

CHAPTER II

THE DIVISION OF LABOR

I

The Economy of Specialization

Division of Labor. — The clew to the labyrinth in which the attempt to analyze a simple business transaction involves the inquirer is given in the first sentence of Adam Smith's *Wealth of Nations;* "The greatest improvement in the productive powers of labor, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labor." Others had seen that the division of labor was important; Adam Smith first gave it its true place as the fundamental principle of economic organization, and on that account perhaps put it at the very beginning of his treatise. The history of industry can be viewed as simply the ever widening application of the principle of the division of labor; the latest economy in business organization, the so-called "scientific management," is a conscious application of it.

From the point of view of the individual the division of labor means *specialization;* from the point of view of society it means *coöperation.* The individual specializes, because by restricting his work to a single trade or a single process he can become more efficient at his work than he could be if it were more varied. But specialization by individuals is practicable only in society. Some individuals can give their time exclusively to the provision of clothing or furniture, only because other individuals are directing their efforts to the provision of food and shelter. In an advanced industrial society every producer is a specialist in detail, because the society includes specialists in every other kind of work needed to satisfy the society's wants.

Advantages of Specialization. — Specialization is fundamental in economic organization, because it is the means by which man increases the return to a given amount of work. It brings about this result in two ways, by subdivision of tasks and by repetition of tasks. Subdivision results in operations easier in themselves, repetition enables operations to be performed with greater ease. "Practice makes perfect"; an operation, if repeated often enough, becomes a habit; our bodies and brains adjust themselves to performing perfectly and without effort what at first is done only badly and with great effort. The estimation of forces and sizes, the exact coördination of hand and eye, called for by almost any craft, become instinctive by specialization; by practice is built up the specialized experience which is the explanation of achievement in all kinds of work — the craftsman's "sense" of the possibilities of his materials, the dealer's "instinct" for his market, the physician's "intuition" of disease, the connoisseur's "feeling" for quality in the objects of his study. Delicate tasks come to be performed with accuracy, the speed of work is increased, the strain involved in the performance of any single task is reduced; the routine of work is, in James's phrase, handed over "to the effortless custody of automatism."

Division of Labor and Exchange. — Specialization can occur only in a society, and implies the habit of exchange. The direct exchange of goods for goods, and goods for services, is called barter, and is so clumsy a method of carrying on exchange that specialization could never have gone far without some medium of exchange which would obviate the clumsiness of barter. Such a medium of exchange is Money. Later we shall examine in some detail the qualities of a good medium of exchange, and the way in which money does its work. Here we need to notice only that such a medium of exchange, generally accepted and easily divisible, is necessary to enable individuals to specialize. So long as money was scarce in quantity and uncertain in quality, so long, that is, as exchanges had to take the form of barter, there was little specialization. The great mass of people were agriculturists raising their own living; there were few specialized workers; trade was confined to luxuries and the small surplus of production over immediate local needs; few people got more than bare physical necessities, and not even these with certainty. In the England of Elizabeth, in continental Europe until much later, as in Asia to-day, the great bulk of the population consisted of peasants engaged in subsistence husbandry. Even then, however, specialization was the chief means of increasing wealth; Adam Smith wrote before the Industrial Revolution.

Forms of Division of Labor. — The simplest form of the division of labor is the specialization of individuals to single industries or trades. As soon as there was any surplus of produce over immediate local needs, the specialized trader arose to collect and distribute that surplus. A very small village community was large enough to enable individuals to devote themselves exclusively to the work of the smith and corn-miller. The making of cloth, baking, the working of stone and leather differentiate themselves early; in a modern community the jobbing carpenter and tailor, the doctor and lawyer, the artist and priest represent this type of the division of labor.

The next form of the division of labor, historically and logically, is the subdivision of one specialized craft into separate processes and the specialization of "detail" workers to each of these processes. Just as the working of metal will be done better by a specialized smith than by a comparatively unspecialized worker like a farmer, so the manufacture of any common metal object will be more rapid and efficient, if it is split up into several processes and a specialized worker set on each of these processes as his exclusive work. Thus the making of cloth became the work of spinners, weavers, fullers, dyers, finishers, each of whom worked at a single process with specialized tools. The cutlery trade to-day is still largely in this condition. The forging, grinding, and putting together of the different parts are each the work of a specialized workman, though the "cutler," who puts together, performs not one but thirty or forty operations. Such subdivision of processes, in addition to increasing the efficiency of the worker at the specialized task, leads to improvements in tools, and ultimately to the invention and application of machinery. A trade in which the making of the article is the work of a number of workers, each specialized to a single process, is, in Marx's words, "a productive mechanism the parts of which are human beings."

II

Machinery

Machinery the Result of Division of Labor. — "A productive mechanism the parts of which are human beings" tends inevitably to give way to a productive mechanism the parts of which shall be inanimate machines. The use of machinery is a result of the division of labor. Once the processes of any manufacture have been split up into operations so simple that they can be called "mechanical," the manufacture is ready to be taken over by a machine. A machine is more reliable and efficient than the most accurate of human workers; a human being, however restricted in the scope of his activities, is not a machine, he is liable to fatigue and inattention, and cannot give the unceasing regularity and uniformity of a steel tool mechanically actuated. The handing over of a process to machinery may be delayed by the existence of cheap labor, but ultimately the machine is bound to win.

The application of machinery to industry, itself the outcome of division of labor, leads to the further specialization of human workers. A machine is a specialized tool which cannot be taught to do anything for which it was not originally intended; it is confined to a single process or to a narrow range of processes, and the human worker who tends it becomes just as specialized himself. We get, therefore, a new series of crafts, arising from the need of special skill to tend special machines. This is not, however, a permanent condition of things; so far as the increasing perfection of machinery makes special human skill unnecessary, it tends to have the opposite effect on the worker; so far as the machine takes over *all* the specialized work, it tends to make the worker an *unspecialized* tender of machines in general. The increasing use of automatic machine-tools, for instance in some branches of the machine industry, tends to make unnecessary the specialized skill of turner, driller, planer, slotter, etc., and to require only the general skill of the man who "sets up" a machine.

Machinery Promotes Division of Labor. — In other and more important ways the application of machinery to industry promotes the division of labor. It makes the process of any manufacture more "*roundabout*" than it was before. The use of machinery requires the specialization of a certain proportion of the workers engaged in an industry to the making of the machines. That in its turn requires the specialization of other workers to the making of tools for making machines, and to the extraction and working of iron and the other raw materials from which these are made. The manufacture of cloth, for instance, no longer employs only the shepherd and shearer, the spinner, weaver, and finisher; it requires also, as we have seen, many classes of machinists to make the carding, combing, and spinning machinery, the looms, etc. It requires also the specialization of more workers to make the power-plant, to feed it and tend it. It creates in fact the great trades of machine-making, coal and iron mining, etc., which lie at the foundation of all big manufactures to-day. Hence the social coöperation which results from the specialization of individuals has become infinitely more complex and far-reaching.

Power Machinery the Basis of the Industrial Revolution. — Non-human power, such as steam, is of use in industry when the final processes of manufacture are still dependent on the specialized skill of manual workers; it becomes infinitely more important when these processes are executed by machines. The machine requires room to house it and power to drive it, and one room and one power-plant will serve many machines. The application of power to industry leads to the collection of many machines in one building and the employment of human workers in regiments. The use of machinery is limited in its scope without non-human power; and on the other hand, the construction of large power-plants is possible only by the use of machinery. Once power and machinery have been invented, the scope of industry is enormously widened. The specialized worker ceases to manufacture directly; he tends and controls machines and engines which manufacture for him. Labor, whether it becomes more or less specialized, becomes increasingly coöperative in character; in Marx's words, "the coöperative character of the labor process is . . . a *technical necessity* dictated by the instrument of labor itself."

And this new coöperation of machine-makers with other workers, of non-human power with human labor, makes enterprises possible which were inconceivable so long as human workers had not specialized some of their labor to

producing this power. No collection of human beings could exert directly the concentrated force of a steam-hammer; you could not, as Professor Meredith remarks, have a railway on a domestic system. Power increases the speed and output of machinery and labor to such an extent that the individual worker cannot maintain himself in industry without its aid. The relation of man to machine is reversed; before the application of power the former is principal and the latter assistant, after the application of power the machine is principal and the man assistant. The ownership of the instruments of production becomes vastly more important, and production by individuals and little groups gives place to production by regiments of workers in factories. The application of non-human power to machinery, then, is *the* revolution in any industry, and the simultaneous application to several important industries is the Industrial Revolution.

III

The Localization of Industries

The Basis of Localization. — Following our clew specialization, we shall understand another feature of modern industry, the concentration of industries in particular localities. In modern industry labor and machines are specialized wherever there is a sufficient volume of trade to keep a specialist constantly at work; the main processes in the manufacture of the chief products of industry are all of them carried on by specialized machines tended by specialized labor. Now the simplest way for a firm to make sure that there will be sufficient volume of trade to enable it to adopt these methods of specialization is to establish its works in a district where there are other firms engaged in the same trade.

The influences which have brought a particular industry to a particular district can be discovered only by studying its history. But three influences are usually predominant. First, cheap power, in the form of coal or water; and this is the most important to-day. The great industrial centers of the world are its coal-fields. Any technical invention which offered a cheaper source of power than coal — such, for example, as the use of the tides — would tend to rearrange the distribution of industry; in another century industry may be concentrated on the ocean front and along inland streams, while people go for quiet and recuperation to Pittsburg and to Gary. Cheap labor has an attraction for industry similar to cheap power; the industries in the crowded sections of many American cities are often based on the cheap labor of the wives and children of foreign immigrants. The second great influence is accessibility to raw materials. The manufacture of steel is strongly localized on those coal-fields which have ore-deposits adjacent, or, in a town like Gary, Ind., at the most convenient point between the coal-fields and the iron mines. The flour-milling industry, which was formerly distributed as widely as the growing of grain, tends now to be concentrated near the great grain-distributing centers. The third great influence is accessibility to markets. The last two influences were much more important before the Industrial Revolution than they are now that transport has become so cheap; the importance of the first dates, of course, from the Industrial Revolution.

Advantages of Localization. — Whatever the influences, however, which bring an industry to a district, the chief advantages of localized industry are all due to the opportunities for greater specialization which concentration affords. Where many firms engaged in the same industry are grouped together, the worker has a better market for his specialized skill and is encouraged to specialize still further. The employer has less difficulty in finding the kind of labor he wants. The industry can command a large number of special services which no single firm could afford and no scattered industry could maintain. Among the most important of such services is the specialized market. The New England mill towns provide the cotton-spinner and manufacturer with facilities for getting their raw materials and disposing of their finished products which they could find only with difficulty elsewhere, and these facilities can be supplied because the cotton industry is so strongly localized. Special transport facilities and the provision of commercial intelligence can be arranged for a localized industry. Scientists, lawyers, accountants find it worth their while to specialize in the problems peculiar to the local industry. Insurance can be effected cheaper. Probably the use of credit can be obtained cheaper where risks and conditions are so well known as they are in a modern specialized locality.

Localization and Allied Trades. — An important type of specialized services is the growth of subsidiary industries, supplying the staple industry with its machinery and incidental requirements of manufacture, and utilizing its by-products. The making of machinery is less localized than other great industries, because the requirements of a modern localized industry are so special that they can best be met by a firm on the spot. The textile districts are the seat also of the dyeing and finishing trades, specialized to suit the particular material manufactured in the district; and these in their turn attract certain chemical and drysalting trades. The complete utilization of by-products is one of the most important economies of modern industry, and is possible only where a localized industry makes a large bulk available without transport charges. Science can find an industrial use for most things, provided that they can be had in quantities and cheap.

Business Organization and Specialization. — While the tendency to specialization is universal in the great industries, the relation of the specialized process to the firm or business unit varies. The specialization may take place within the firm or within the trade; *i.e.* processes may be carried out by specialized departments in the firm, or by specialized firms in the trade. During the greater part of the nineteenth century the tendency was for individual firms to devote themselves more and more exclusively to a single process or a small group of related processes. To-day in many trades the tendency is in the opposite direction, namely, to unify under one management all the processes in the manufacture of a given product. The opposing tendencies may be seen most clearly by contrasting the heavy steel industry with the leading textile industries. In the former, till the middle of the nineteenth century, the different processes of the manufacture of steel, the getting and blasting of the ore, the working of the steel, and the construction of ships, bridges, and other heavy steel goods, were carried on chiefly by separate firms. To-day the rule is for all processes to be carried on by the same management. In the woolen industry, on the other hand, the different processes, combing, spinning, weaving, dyeing, and finishing, are usually undertaken by separate firms; many firms deal with one special kind of wool or yarn only, and it is the rare exception for a single firm to carry the wool through all the processes of manufacture. The specialization of labor and processes is just as detailed in the heavy steel industry as in the textile industries, but the business unit is different. To some extent the difference is due to technical economies; in the steel industry, where the whole manufacture is under one management, the steel can be passed forward from process to process without reheating. Another reason may be the difference in the size of a unit of product. In the heavy steel industry the unit is immense — a bridge or an ocean liner — and the contributing processes of manufacture are very numerous and varied; hence centralized management is an economy. In the textile trades the unit of product is small — the piece — the processes of manufacture comparatively few and simple, and success in management dependent chiefly on securing a large and steady output of uniform quality.

IV

Large-scale Production, and the Limits of Specialization

Specialization and Concentration. — An important result of the specialization of labor and the use of power-machines has been the growth of large-scale enterprise. How far does this tendency go? The terms large-scale and small-scale enterprise are obviously relative to the industry, and the chief influence in fixing the average size of the business is the technical methods of the trade. Small-scale coal-mining is still carried on, but it is unimportant; while steel shipbuilding can be carried on only by a large concern. Certain general aspects of organization, however, can be considered without immediate reference to technical considerations.

Advantages of Concentration. — On the whole, there is a steady tendency towards enterprise on a large scale. The advantages of large-scale enterprise are very like the advantages of localization of industry, since they consist chiefly in the greater specialization of implements and workers which a large output permits. A large works can employ highly specialized workers of all grades, and keep them fully employed on their special work; it can buy the best skill, and get good value for a good wage, while a small firm that employs a highly specialized worker will have to use him part of his time for other purposes, for which a less paid worker would have done as well. The large firm can do the same with machines; it can build an automatic machine for a single detail of a single process, because its large output insures that this detail will recur so frequently as to keep the machine constantly at work. It can afford resources which a small firm has not enough work to make worth while. A big machine shop with its electric crane will move a casting in a tenth of the time taken in a small shop without that convenience. A big works can have its own railway-sidings and wharves, its repair shops to save time and prevent dislocation in case of a breakdown. A Rockefeller dealing with oil in bulk could construct a system of pipe-lines for distributing it which was very expensive, but, once it was constructed, far more economical than any other means. The big concern can save sometimes by buying its material in bulk. It should always save in its selling organization by employing fewer travelers and advertising less: its goods advertise one another.

Weaknesses of Concentration. — The advantages of large-scale production are so great that we might expect the small firm to be driven out of industry. But the small firm refuses to be driven out; if the reader doubts this, let him consult a local trade directory and count the number of small businesses in it. The small firm has advantages of its own to set against the obvious economies of a large output. We must remember that small and large firms are usually competing for a growing volume of trade, not for a fixed amount; so that the gains of the large concern need not necessarily be at the expense of the small concern. But there are other reasons, especially the difficulties connected with the organization of a big works. With every increase in the size of a concern, there is a more than proportionate increase in the difficulty of management and organization. " Just as in an army there are many who can fill the position of captain, few who can fill that of colonel, and almost none who are competent to be generals in command — so in industrial enterprise there are many men who can manage a thousand dollars, few who can manage a million, and next to none who can manage fifty millions." [1] Hence there is usually more waste in the big than in the small concern; especially is this the case when the firms contrasted are a large joint-stock company managed by salaried officials

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[1] A. T. Hadley, quoted by Macgregor, *Industrial Combination*, p. 37.

and a small private business managed by the owner, who bears any loss due to waste.

A particular form of waste and a weakness of all big concerns is the tendency to routine. The detailed specialization, the need for checks and records, involve routine — the routine we call " red tape " in the case of Government Departments — and routine kills initiative and adaptability. The big concern can usually produce only standard lines. It cannot adapt its organization so quickly as the smaller firms to the changing wants and whims of the customer. It can give the customer the *kind* of thing he wants much more cheaply than the small firm; it can seldom give him exactly the thing he wants, and the customer will often pay out of all proportion for the slight additional satisfaction of getting the exact thing.

Obstacles to Concentration. — In some important industries there are technical obstacles to large-scale enterprise. Wherever the material worked is not uniform in quality, or cannot be graded and treated in bulk, then the large-scale method of specialized processes and large output will not apply. In agriculture the opposition appears clearly. Where population is sparse and land is cheap, grain farming with agricultural machinery or stock raising on a large scale is economical. In more crowded regions it pays better to utilize the slightly varying qualities of every acre — by fruit, vegetable, or dairy farming — and the necessary care and detailed attention will be best given by the small farmer, especially the small proprietor.

Again, specialization within the trade puts within the reach of the small firm facilities which, but for the localization of industries, would be within the reach of large firms only. The full utilization of by-products, the adaptation of means of transport to the needs of the staple trade, insurance and credit agencies, special markets, the services of experts and subsidiary industries, all help the average-sized concern to hold its own in the market against the giant concern. The development of large-scale production in a subsidiary industry or a section of an industry may be a help to small-scale enterprise in another part of the industry; the small joiner can get moldings from the large sawmill, the small cycle-builder parts from the factory which makes parts. In every trade, however, there seems to be a point beyond which any increase in the size of the concern brings no new economies, or rather beyond which any new economies are neutralized by the increased difficulty in the work of management. This limit is constantly receding as the work of management is reduced to routine or science; but the limit is always there in the limited capacity of the average business man. And such statistics as are available, especially those of the United States,[1] where the tendency to concentration is strongest, show that the number of separate businesses is increasing more rapidly than the population.

Specialization and the Extent of the Market. — The small firm holds its own; the average size of firms increases, but the number of firms also increases. The advantage of the big firm is that it can carry specialization further; the strength of the small firm lies in the limits of specialization. How far can specialization be carried? We may go again to Adam Smith for our answer: "The division of labor is limited by the extent of the market." Unless there is a large market, which implies a large, steady, and uniform demand, specialization does not pay. It does not pay to specialize a man or a machine, unless there is sufficient work to keep them constantly employed on their special work. Specialization is most economical when

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[1] Number of factories, excluding hand and neighborhood industries: —

1899 (recorded in 1900 Census) . .	207,514
1904 (" " 1905 ") . .	216,180
1909 (" " 1910 ") . .	268,491

Including hand and neighborhood industries: —

1889 (recorded in 1890 Census) . .	355,405
1899 (" " 1900 ") . .	512,191

applied to a manufacture that can be standardized, and an article or process cannot be standardized unless there is a large trade.

The Survival of the Small Firm. — Now there are many articles and services for which the demand is not large, steady, and uniform; there are many processes of manufacture which cannot be standardized. Here is the field of the small firm. When a single specialized craftsman performed all the processes of a manufacture, he not infrequently, as a part of his craft, made and repaired his own tools. The "tools" of modern industry are machines, and the making of them is a specialized industry with many branches; the repairs, however, of modern industry cannot be so specialized. Consequently, there are many small businesses which are occupied wholly in repairs; and though the system of constructing all machines of interchangeable parts makes the work of many of them unnecessary, there must always be a need for some "general" artisans and businesses capable of dealing with any repair. Similarly, the advantages of being on the spot and not too specialized will probably enable the single workman to keep a large share of the work of domestic repairs and retail shopkeeping.

Technical difficulties in the way of standardizing processes still offer obstacles to large-scale production, as in all kinds of intensive agriculture. Cutlery and other light metal trades, though using more and more machinery, will long retain a place for the "little master." Thirty-eight separate operations are needed to put together the parts of a cheap pocket-knife, and such work does not offer much scope to the automatic machine. So far as power is needed, there was a force driving the "little master" into the factory; but that force works now rather in the opposite direction, for the little master can obtain a supply of power in his own workshop by employing electricity. When an industry is new and its methods and processes are still experimental, the adaptability of the small firm is a greater advantage than the resources of the large firm, and the small firm usually plays the part of pioneer. The biggest firms, in industries in which large and small firms are both found, are often firms which began in a small way and seized their chance when the industry was new, or when some invention or new market gave the industry a new start.

In some industries, though the processes could be standardized, the demand for an article is so limited that it would be absurd and wasteful to employ the resources of modern machinery and industrial organization. The weaving of short patterns and ranges in the textile trades is largely done on hand-looms for this reason, and certain expensive Paris fabrics, where the order for a pattern may not exceed a dozen yards, are still manufactured by " little master " weavers working for merchants. These workers are in the same economic position — though they possess a much higher economic and social status — as many of the " sweated " workers. Among " sweated " workers the division of processes has usually been carried far enough to make the work of each individual simple and easy, but the natural evolution from that simplified manual work to the use of power-machines has not taken place because the labor can be got cheaper than the machine. Hence the domestic hand-workers in such trades as the tailoring, shirt-making, and box-making trades are competing with power-machines in the factory trades and can sustain the competition only by accepting wages too low to " keep " them in any real sense.

Wherever individual requirements have to be met, the factory-made article is out of place. Clothes and shoes are made in factories; but if we want clothes or shoes that fit exactly, and not merely approximately, we go to the custom tailor or boot-maker, who does not carry specialization far. Individuality is the essence of art; to be beautiful it would seem that a thing must bear the impress of its maker's personality. There is little room then for specialization in the making of beautiful things. If we want the material apparatus of life to be beautiful, we must be content with less of it; we must choose between a great many ugly and ordinary things and a few beautiful and unique things.

The State of the Market and Transport. — Adam Smith's principle " that the division of labor is limited by the extent of the market," is illuminating in another respect. The most important influence in determining the extent of the market is the state of the means of transport. Every improvement in the means of transport makes exchanges economical which before were not economical. It enables the district which can produce an article cheapest to supply other districts more cheaply than they can make for themselves, that is, to extend its market; therefore, Adam Smith says, " good roads, canals, and navigable rivers, by diminishing the expense of carriage . . . are . . . the greatest of all improvements." Cheap transport encourages the full utilization of special local advantages such as climate, soil, traditional skill, established organization; the production of goods where they can be produced cheapest; the progressive localization of industries; and the use of the resources of each district for the benefit of all districts. Trade began in luxuries; with improvements in roads and the art of navigation, it extended to comforts; in the nineteenth century, with the application of steam-power to transport, it extended to the necessities of life. Transport is now so cheap that in advanced industrial countries districts are like individuals, specialized in production and dependent on exchange for the satisfaction of their most important wants. Because the localization of industries, with all its economies in production, is dependent on cheap and efficient transport, the transport industries are, with the steel and coal industries and the credit system, at the foundation of the modern industrial organization.

V

The Evils of Specialization

Narrowness. — The benefits of the division of labor lie in the increased power it gives man to produce wealth of all kinds. This increase is incalculable; without it life would be like the life of Hobbes's primitive man, "solitary, poore, nasty, brutish and short." If any reader doubts the benefits, let him make a list of the things he uses and consumes in the course of a single day, and then estimate the time it would take him to produce these by his own unaided labor; such an experiment will do more than any amount of reading to convince him. But these benefits are accompanied for the worker by serious evils, and the benefits have rather obscured the evils and prevented due efforts to remove them. One reason for this neglect may be that modern industrial methods have incidentally counteracted some of these evils. The great improvement in the material conditions of the worker's life, which has resulted from the greater productivity of modern industry, has given the industrial worker opportunities of self-culture which have neutralized some of the evils of specialization. He is better clothed, better fed, better housed, and he lives a fuller life outside his work than he did in the days when the work itself was less narrowly specialized and more educational. Similarly, the concentration of the industrial population in towns, in spite of its peculiar evils, has stimulated intellectual life and, with increased leisure and income, done much to counteract the deadening effects of monotonous employment. The New England cotton operative is occupied with a far narrower range of operations than the farm laborer; his material environment is far less varied, and his work far less interesting, yet his intellectual life is far more vigorous; the general intellectual keenness of some of the mill towns might put some universities to shame.

Means Substituted for End. — But the advantages, direct and indirect, of the division of labor are no reason for ignoring the evils, if any consideration of these will tend to reduce them. We shall refer to them again in Chapter XXIV, but some consideration of them will not be wasted here, since we shall have to refer to the division of labor again and again in the intervening chapters. The first of these evils is the inevitable danger that the workman will be treated simply as a means and not as an end. Dr. Ure, and other early advocates of the Factory System, did habitually write as if man was intended for production, not production for man; they justify Marx's statement: "In its machinery system Modern Industry has a productive organism that is purely objective, in which the laborer becomes a mere appendage to an already existing material condition of production." The earlier English factory owners were guilty of the systematic exploitation of child-labor. Machines were adapted, and the processes of manual labor simplified, to suit the children's powers, and their labor was used with entire disregard to their subsequent life. The half-timer of to-day, the doffers in the worsted factory who acquire a skill worth a few dollars a week and learn nothing more, the cotton-piecers who by no possibility can all of them become spinners; the youths who work light automatics in machine shops and earn a good wage for a youth, without having the chance of fitting themselves for earning a good wage for a man; the whole crowd of "Blind Alley" occupations which the English Poor Law Commission in 1909, and Karl Marx in 1867, showed to be an integral part of the modern industrial system, are only the most striking example of this use of human beings as "means" of production without reference to their right to consideration as "ends." The latter instance has attracted attention because the industrial use of children and adolescents often makes them industrially useless when they become adults. But the detailed specialization of laborers must always hamper the all-round development of the faculties, which was the Pagan ideal of manhood and is not inconsistent with the Christian ideal. Specialization of labor and monotony of work make for economic efficiency, but are not therefore wholly good; by themselves they tend to produce lop-sided development in the man; and the social system which accepts the increase of wealth due to the monotony of work, without devoting some of it to counteracting the effects of that monotony outside work, is forgetting the end for which wealth is produced.

Evil Partially Hidden. — This tendency of the division of labor to degrade or hamper the development of large masses of workers is not noticed, because the increased wealth due to it neutralizes many of its ill effects. But the tendency is there, and, if anything, is increasing in strength. The actual processes in which the detail laborers are engaged are perhaps calling for a higher type of machine-tender, and the exploitation of child labor is diminishing; but the manual laborer is getting less if anything of the organizing work in industry, the work of direction, which requires initiative and develops character. The specialization of the work of direction, of organization, of initiative in the hands of a small proportion of the whole number of people "engaged" in industry, is perhaps the greatest evil of the modern industrial organization. It removes from the work of the great majority of people the educational element, the element that develops the highest faculties and character. The medieval craftsman, like the working farmer to-day, was constantly making choice between alternatives and exercising his judgment and initiative; and exercise develops will and judgment. Not only were the processes of manufacture not reduced to routine, but each man had the conduct of the business side of his work himself. He was his own master, self-controlled; he dealt directly with the market, and though the market was a little local market, a simple thing compared with the market of to-day, it did take a man outside his workshop and

gave him some practice in the difficult art of adjusting social relations.

Destruction of Initiative. — The great mass of workers to-day are not self-controlled; they are cogs in a machine controlled by others, and their efficiency depends less on their initiative and adaptability than on mechanical regularity of work. They have no part in the organization of the workshop; they have no part in the organization of trades which is done in the market. Their work is routine — requiring often a very high degree of specialized skill, but still routine; and routine is not educational. It kills initiative and stupefies character. The grading of work, the possibility of keeping your ablest men constantly occupied on the most difficult work, which is always pointed out as one of the chief economies of the division of labor, tends to be realized. The great organizer has concentrated in his charge all the work of organization and direction which an industrial unit, including hundreds of workers, requires; and if he has the work the others cannot have it. He does it far better than smaller men would do it; but the fact that he does it and they do not makes him bigger still and them smaller still. What originality they are capable of is never developed, while his organizing faculties are developed to their highest pitch. The work of organization, direction, initiative, tends to be specialized, like any process of material manufacture. The economic result is more efficient organization and direction, and an increasing rate of technical progress; the social result is that the mass of adults have their chief educational element taken out of their work; and since their work occupies the greater part of their working lives, and has the first claim on their faculties, the loss is irreparable.

Probably this concentration of responsible work in the hands of a small class, the great majority of workers being specialized to automatic, non-responsible work, is the chief explanation of the most remarkable social phenomenon of the time. In some Western countries with democratic franchises one-tenth of the people own nine-tenths of the wealth. A considerable proportion of the voters are constantly on the verge of destitution, while a small minority flaunt in their faces the most extravagant luxury. How is it that the populace does not use its political power to remove such inequalities? What is it prevents the social revolution? It is not a scientific understanding of the reasons of these inequalities, or any doubt as to the possibilities of reorganizing industry without them, for no study is so neglected in England and the United States as the scientific study of economic organization. The explanation is largely habit, the inertia of uneducated masses, the fatalism that is almost inevitable after ten hours a day, five and a half days a week, and fifty weeks a year of monotonous toil in a factory. But another explanation is that the people who suffer most under the present industrial system have the habit of initiative rigorously ground out of them by the system. If they have ideas of something better they have no experience of putting ideas into effect. They are revolutionary and Utopian when what is wanted is the practical experience of the business man. They are so in the habit of being told what to do that they do nothing when they have only themselves to tell them to do it. Of course there are individuals who retain their initiative and capacity for direction in spite of the mechanical nature of their work, but they — even if their capacity does not lift them out of their class — are helpless so long as the mass of their fellows succumb to the mechanical nature of their work. In Marx's words, " the separation of the intellectual powers of production from the manual labor, and the conversion of these powers into the might of capital over labor, is . . . finally completed by modern industry erected on the foundation of machinery."

Risk of Specialization. — The individual laborer suffers in another way. By being forced to specialize, he is forced to incur the risks of specialization. The highly specialized workman is in the same position as the capitalist who has invested his capital in highly specialized machinery. His skill has only a limited field of employment, and loses its value outside that field. Hence he may be forced to accept terms which are below the market price for that standard of energy and knowledge, the only alternative being to give up his special skill and seek employment in another trade. The fact that there was a dearth of coal-miners would not assist the artisan in an overcrowded trade to protect his standard of life. Further, the artisan with a highly specialized skill has a commodity to sell which may have a monopoly value one year and have lost its value the next owing to some invention. The owner of machinery provides against a similar event by writing off so much of the value of his machinery annually; the owner of skill should perhaps do the same, but the wages are rarely big enough to encourage such rigorous account-keeping; and the possibility which technical science continually offers the employer of dispensing with certain classes of skill by introducing new processes seriously weakens the bargaining position of the workman, and increases his dependence on the employer. The egregious Dr. Ure's description of the self-acting mule, " a creation destined to restore order among the industrious classes," and the inference he draws, " when capital enlists science into her service, the refractory hand of labor will always be taught docility," are very significant.

Lack of Adaptability and Production. — The extreme specialization of modern industry is not without its disadvantages from the point of view of productivity. While it increases the efficiency of the laborer for particular tasks, it limits his scope, lessening his adaptability and capacity for undertaking novel work. And the technique of industry changes rapidly. " We do not to-day want men who are ' all round ' at building marine-engines — we do need men who are ' all round ' mechanical engineers — men who can apply the principles of their craft to any form of machinery that may be called for," Sir Christopher Furniss told the British Poor Law Commission. " If [the boy's] training is sacrificed to the demand for a very limited and highly specialized skill in the management of one kind of machine or in one operation, the factory may benefit at the moment, but will suffer later on in having too few thoroughly trained men to draw upon when conditions change, as they must do in any progressive industry " (Professor Barr). Employers in the machine industry who complain that they cannot get men capable of anything but a single job have themselves to blame. The specialization of labor that pays the individual employer may be an economy in production for which society has to pay in the long run. The rate at which technique improves is limited by the capacity of labor to work the new methods.

This raises the question whether the use of machinery may not make special skill unnecessary and ultimately restrict the division of labor. No generalization is possible. Machinery has undoubtedly superseded and is superseding "craftsmanship " in all staple manufactures. That is the first effect of mechanical invention; the machine takes over the work formerly performed by the specialized manual skill of the laborer and makes the laborer a machine-feeder. But there is another effect. When the machine-feeder's work is purely mechanical the machine can also take that over; and the laborer's work, instead of being the mechanical " feeding," becomes the more complicated task of " setting up " the machine. Where women and young persons are employed power machinery has reduced the demand for skill; but in the greater industries employing adult male labor, while a lower grade of manual skill is required, a higher level of general intelligence is required. Machines become more intricate and delicate, and alter more rapidly; their charge cannot be intrusted to men who have not both manual dexterity of a

varied kind and an intelligent comprehension of the principle of the machine. Progressive employers who are constantly experimenting with new processes and methods may take trouble to train versatile and intelligent workmen. But a large output can usually be secured on conservative lines by the extreme specialization of labor; and that specialization makes against versatility and intelligence. To secure the plentiful supply of versatile and intelligent workmen that is essential if technical progress is not to be hampered, a system of technical education is needed for the rank and file as well as for the future leaders of industry which shall not be mere instruction in trades, but a liberal education in the sciences underlying technology, and this the best technical schools are trying to give.

CHAPTER III

THE ORGANIZATION OF PRODUCTION

I

The Coördination of Specialists

The Necessity for Coördination. — We have seen that specialization is the principle on which the whole modern organization of industry is based; let us see where it has led us. The man who wants a shirt no longer makes cloth and from the cloth makes a shirt. He buys the shirt, and the shirt is made by the combined labor of some hundreds of specialized workers scattered all over the world. Every worker who takes part in the making of the shirt is specialized; by himself he can do little or nothing, his labor is useful only when combined with the labor of other men equally specialized and therefore by themselves equally useless. Every machine that is used is of service only because it is coöperating with the right kind of labor and with other machines. Every firm is specialized; it makes nothing by itself, merely contributing its part to the whole process of making the shirt. What is called in ordinary conversation " the manufacture of shirts " is only the completion of a long process which began when the sheep was sheared that supplied the wool, or shall we say when the sheep was bred? Every industry is specialized, and many industries contribute to the making of one shirt; it is only by the coöperation of the sheep-farming, spinning, weaving, finishing, clothing, machinery, coal, transport, and many other trades that the

modern shirt manages to get itself made. Thus specialization has brought us to a condition in which laborers are helpless by themselves, machines are useless by themselves, firms make only a fraction of an article, and industries can do their work only by coöperating with other industries. How is all this coöperation brought about? How are all the specialists linked up into an organization that can turn out shirts at $2.50 each?

Coördination an Unconscious Process. — The specialists themselves are seldom conscious of this coöperation; they do not do their work because others are dependent on it, but because they are paid to do it. Their combination is at first sight not the combination of a good football team, but the combination of a mob, or of the separate particles of water that combine under the compulsion of external force to form a stream. Nor is this coöperation organized by any central authority. Such an arrangement might have been possible in a City-State or an isolated kingdom, and the State at some periods in the past has attempted to control the direction of productive effort. But even in the time of the Gilds and under the Mercantile System, the movements and organization of industry were the result of spontaneous arrangements between individuals, regulated perhaps, but not dictated by the State. And to-day the industry of different countries is so intimately bound together in world-markets that there is no central authority far-reaching enough in its scope to undertake the direction and control of such extensive coöperation.

Coördination Itself a Specialty. — How then is this coöperation secured? It is secured by a further application of the principle of specialization itself, by the existence of a class whose work it is to organize this coöperation. Side by side with the growth of specialization in the processes of production, there has grown up a class of men whose business it is to link these specialists together and to make a working organization of them. These organizers of modern industry correspond roughly with the class we in this country call "business men." The specialized laborers are collected and supplied with the necessary tools, machines, and material by one set of organizers; to supply exactly the right kind and amount of labor with exactly the right kinds and amount of capital, and to keep them working steadily and harmoniously without waste of material, time, or energy, is a work requiring special knowledge and technical skill, and society relies on its "captains of industry" to supply this knowledge and skill. What the head of the firm does along with other work, the foreman, the shop-manager, works-manager, general manager do as their special work; they organize industry, they decide what shall be the exact division of labor, they decide in what form of tools and machines the capital of society shall be applied to industry — important work, even though the majority of them are content to copy their neighbors and follow a traditional routine.

II

The Functions of the "Middleman"

The Middleman. — But what of the specialized firm and the specialized trade? The division of labor has created gulfs not only between worker and worker, but between firm and firm and trade and trade. Who organizes firms and trades into the great productive mechanism that delivered to us our two-dollar-and-a-half shirt made of Australian wool and Southern cotton in a New England mill? This work is done chiefly by the head of the firm again. In a large firm parts of it will be delegated to salaried employees, but for the general supervision of it the head of the firm is responsible. He buys the raw material, thus bridging the gulf which the division of labor has created between, say, the firms that weave flannel and the firms that spin yarn or import wool. He is responsible for the mill's equipment, thus bridging that other gulf between the firms that make machinery and the firms that use it. But there is another class of organizers who do this work of linking together specialized firms and industries — the merchant or middleman class. Between every two stages in the productive process of any great manufacture will be found the merchant or middleman, acting as a bridge over the gulf: cloth is bought by tailors from merchants who bought it from manufacturers; yarn is bought by manufacturers from merchants who bought it from spinners; wool tops are bought by spinners from merchants who bought the wool from other merchants, who bought it from the wool grower. It is by this middleman class that coöperation between widely separated firms is organized; without it our shirt would never have found its way half round the world and through New England from the sheep's back to ours.

The Middleman a Necessary Link. — Popular opinion makes a sharp distinction between manufacturer and merchant, recognizing the organizing work of the former but not of the latter; but the distinction does not correspond with any profound distinction of function. The special functions of the two are rarely quite separated in actual business; both are organizers, and in the real sense producers. The manufacturer buys raw materials, labor, capital equipment, and sells articles in a condition to be used either as raw material by another industry or as finished goods by the consumer. The merchant buys commodities in a condition to be used, and sells them where they are wanted; without his collecting and distributing work the commodities would not be completely "produced," since they would not be in the places where they can be used. The division of labor between "manufacturer" and "merchant" is convenient. The first business of the manufacturer is to manufacture, which he does by organizing the coöperation of specialized workers, machines, and departments. But his business cannot be carried on unless there is a working connection between it and the businesses which supply it with its equipment and raw material; and its work is useless unless there is a working connection with the trades or consumers who take its product. The establishment of this working connection is the middleman's special work. It may be done by the manufacturer; some of it always is; but in most large trades there is a specialist, a merchant, to do it.

The Factory Manager. — Every trade has to buy from other trades, and has to sell its products. This buying and selling is inseparable from specialized production. As the organizing work *within* the manufacture becomes more complicated, it tends to be done by a whole-time specialist. And similarly, as the connections between trades become more complicated, the work of maintaining these connections in a state of efficiency tends to become the exclusive work of a specialist. The two specialists may be the same firm; the tendency is perhaps for both pieces of work to be entrusted to salaried officials of the same firm. But the independent merchant — simply because he specializes in the needs of a whole trade and not in those of a single firm — can usually offer facilities which make it "pay" firms to deal with him. Thus he ***organizes*** the coöperation of specialized firms and trade, in the same way as the factory manager organizes the work of specialized workers and machines. This is obvious where the processes of manufacture are carried on largely on commission. The merchant in this case bears the same relation to the commission comber, spinner, manufacturer, and dyer and finisher, as the general manager of a steel works does to the furnace, foundry, rolling mills, machine shop and fitting shops, or as the manager of a weaving establishment does to the warpers, winders, twisters and weavers, tuners, etc.

Services of Middlemen. — The merchant and the shopkeeper are called "middlemen," however, not because they stand between firm and firm, between trade and trade, and connect them, but because they stand between "producer" and consumer. We often bear them a grudge for standing there, and are reluctant to recognize that they perform any useful function in return for the profits they obtain. Commerce and exchange are thought to be "unproductive," because things do not alter their form by being exchanged. Such a view is based on a misunderstanding of the process of production. The obvious question which it suggests is, Why does exchange go on? Unless the parties to the exchange are both better off by it, why do both agree to it? The objection ignores the obvious fact that the same thing may have different degrees of usefulness for different persons and at different places and at different times. Bananas are more useful to Englishmen than to West Indians because West Indians have more than they can possible digest, and any one who brings bananas from the West Indies to England is adding to the sum total of satisfaction in the world; ice is more capable of satisfying wants in hot countries than in the arctic regions, in summer than in winter, and it does not make the slightest difference to the amount of satisfaction obtained from the use of ice in a hot summer whether the ice is imported from the arctic regions or saved in an ice cellar or manufactured.

Nature of Middleman's "Toll." — The middleman stands between producer and consumer, but not to obstruct; if his profits are a toll, it is a toll levied not at a toll-bar on an otherwise open road, but a toll for the use of a very necessary bridge. It would be impossible for the consumer as a rule to order directly from the innumerable producers who coöperate in the production of the simplest article; it would be extremely difficult for the producers always to find the person who wants their product — even if any producer could perform the impossible task of identifying on the finished article his particular contribution to its making. The middleman helps both; for the producer he finds a market, for the consumer he finds out what he wants and gets it for him. Just as the suburban vegetable-dealer calls round on his customers for orders, so the middleman finds out what things are wanted and where they are wanted, and collects them with a view to satisfying these wants. If the shopkeeper's customers had to go direct for everything they wanted they would never get half their wants satisfied; so the shopkeeper collects and stocks all the kind of things that they want and lets them have them at the time and in the form and amounts in which they want them. Of course the middleman does not passively wait for the consumer to say what he wants; the consumer is usually a person of sluggish intellect who does not know what he wants, and the middleman can to some extent control the consumer's wants, by advertising or other ways of pushing sales; but his power in this direction is limited, and he could not carry on his business permanently by supplying customers with things which they do not want. In effect the middleman, whether merchant or shopkeeper, goes into the world of business and says to the producer, "Tell me what you produce and I will find you the man that wants it"; to the consumer, "Tell me what you want and I will get it for you." He saves both producer and consumer trouble; his profits are the charge he makes.

Middleman Essential to Localization. — The merchant arose before the "captain of industry." Trade grew up before the division of labor had been carried far enough to require the organization of factories or workshops; for different regions have different capacities, and by exchanging their products all benefit. With the growth of modern industry, however, the middleman's work has become vastly more important. Buying in the cheapest market and selling in the dearest, he is performing an important part in the organization of industry. A thing is dear where it is wanted, it is cheap where it can be produced easily; the middleman therefore encourages production where production is cheap and discourages it where it is expensive, and at the same time directs goods from the places where they are wanted less to the places where they are wanted more. Commerce *equalizes* the supply of goods in the different parts of the world; a few cents a yard on the price of cloth will divert an order from one country to another, a cent on the bushel of wheat from one continent to another. The localization of industry is largely the result of the action of middlemen, and their function is a necessary function in an industrial organization which enables the consumer to have delivered at his door the products of every country, obtained where they are produced most cheaply.

III

Methods of Appointing the Organizers of Production

Importance of Organization. — The organizer, then, whether manufacturer or merchant, is the pivot of the modern industrial organization. On the efficiency with which he organizes the coöperation of specialists the effectiveness of their work depends. On him the consumer depends for getting what he wants and not some makeshift. Specialization is the principle on which all increase in productive power depends — specialization is effective only when the specialists coöperate, and with every increase in the degree of specialization the work of organizing the coöperation becomes more important and more difficult.

Need for Right Kind of Organizers. — It is of the utmost importance, therefore, to the material well-being of society that the right men occupy this position. If they do not, there will be waste; inefficiency there neutralizes the efficiency of scores or hundreds and even thousands of specialized workers, just as an incompetent general can ruin the finest army. Inefficiency in the organizer means that departments are held up because other departments are not ready for their product; it means that some firms in the trade work overtime, while others are not fully employed; it means that articles are produced that the consumer does not want and will not pay for, while articles he does want are produced in insufficient quantities and, consequently, are to be had only at a fancy price. The organizers control the capital of the country; they decide, guiding themselves of course by reference to the demand of consumers, to what purposes it shall be applied and in what form it shall be applied. Want of judgment on their part may result in the creation of forms of capital which are useless — as, for instance, when mills are put up to meet an increase in demand which never comes. Originality and enterprise on their part, on the other hand, will make production cheaper and cheaper, since it will insure the application of capital in those forms and at those points where it is most productive. They are society's paymasters; to them the consumer hands the price of the goods which he consumes; they distribute it between the different classes of workers, capitalists, and land-owners; in a word they *employ* land, labor, and capital; competition between land, labor, and capital for the national income takes place through the employer, and since the merchant employs the different employers in the same way as they employ land, labor, and capital, the competition between different trades for the national income takes place through the merchant. They "represent," as it were, the consumer in his relations with producers. Their *function*, in fact, whether they perform it ill or well, is the organization of production; the method of their appointment and payment is a most important question in social politics.

Importance of Efficiency of Organizers. — We have looked at the organizer from the point of view of society to find out what is his position in an industry, his relation to different industrial classes, and the service he performs; the resulting picture is one which the business man might not recognize as his own portrait. This is natural, since the viewpoint of society is different from that of any individual. The business man looks at industry simply as a series of market transactions; he buys at one price and sells at another, taking the difference for himself or standing the loss if the difference is against him. There is no inconsistency between the view he takes of himself and the view we have taken of him. Few people would recognize their own description by a physiologist or psychologist, but we do not therefore say that the descriptions given by physiology and psychology are untrue. At the same time it is necessary to guard against a possible misunderstanding. We have been trying to get at the work which the business man performs in the social organization of industry. We have found that the present organization of industry requires a class of organizers; we shall find that it requires a class of risk-takers, and we find that the work of these classes is being done by the class of business men. We have not yet examined the question whether the business men, to whom the necessary and important work is allotted, do it well or not; and in saying that the business men are the organizers and risk-takers of modern industry, we are not at all suggesting that the work of organization and risk-taking is done perfectly or even as well as it might be. That depends entirely on the efficiency of the business men; all that we have done so far is to bring out the necessity and importance of this work of organization, and we have now to inquire how the individuals who have the charge of this work come to occupy the positions they do.

Selection of Organizers. — How then are the organizers of industry appointed? Some are appointed by the State; the organizers of the German railways are so appointed; most of the organizers of the tramway, electricity, water, and gas services in England are so appointed; but such appointments are only a small proportion of the total number of organizing posts in the community. It will be noticed that most of the instances of public appointments are in industries the services of which are consumed entirely within the area of the particular public authority. If the authority, therefore, is a representative body, we may say that these appointments are made by the consumers. Similarly the organizers of the great body of industry under the control of the coöperative movement are appointed by the consumers; the directors of the Coöperative Wholesale Society in England are appointed by and responsible to, the customers of the Coöperative Wholesale Society; indirectly, therefore, the customers control the appointment of the managers of separate departments.

The Coöperative Movement. — There is another form of "coöperative" effort which has attracted an amount of attention out of all proportion to its extent and success, *i.e.* the association of producers in what are called self-governing workshops or coöperative productive workshops. Their history offers a marked contrast to the success of the Coöperative Store and Wholesale movement. In them the organizers are appointed by the workers in the industrial unit, and no system of appointment has such a record of recurring failure. Obviously the discipline and order which modern methods of factory production require will be hard to secure when the manager is responsible to, and controlled by, the people he manages. During the nineteenth century a new form of business unit has grown to importance in the Corporation, a form which we shall consider in detail when we are considering the organization of capital. In its essence it is an association of capitalists large and small to carry on a business by the employment of paid organizers. Here the organizers are appointed by the capitalists; the owners of the capital, the shareholders, elect the directors who do the chief work of organizing. They in turn appoint managing directors and general managers who appoint the different subordinate managers. The ultimate control here lies in the hands of the people who supply the capital of the business, and this method of business organization is the most significant

of the present time for two reasons — first, in it the ownership and the employment of capital are separated; secondly, the work of organization is separated from the bearing of risk, the former being done by specialized workmen for regular salaries, while the latter is undertaken by the shareholders to whom the profits go.

Self-appointment of Organizers. — Important, however, as are these methods of appointing organizers, and significant as they may be for the future, they are none of them the most general method of appointing organizers at the present time. The great majority of the organizers in industry to-day simply appoint themselves. Since the Industrial Revolution the restrictions imposed by privileged gilds and corporations, and by the State itself, on the choice of occupations and freedom of trade have been relaxed, and a system of free enterprise or *laissez-faire* adopted. *Laissez-faire* is simply a policy of leaving any one free to set up business in any trade which he wishes. The State to-day does not, except in the case of a few professions, such as medicine and the law, prescribe special training for any occupation, or reserve by legal restriction the organizing posts in industry and commerce for any special class. So far as the law of the country is concerned, any one is at liberty to take up any organizing work, that is to say, any one may start any business which he thinks will pay. In effect, the community announces, "If any one thinks he can satisfy any want, let him start a business to do so: if he succeeds, he shall have the profits of his enterprise; if he fails, he and the people who have dealt with him shall bear the loss, for he will become a bankrupt."

IV

Merits and Defects of the System of " Free Enterprise "

Free Enterprise and Flexibility in Production. — This freedom of enterprise is the chief source of the elasticity of the modern productive organization. Individuals, being at liberty to avail themselves of any opening they can perceive, establish new businesses or adapt old businesses to every new want. The rapidity with which new inventions like the automobile and the " movie " have been taken up and erected into important industries within the last generation, or the adaptability of the textile industries to changes in fashion, will serve as illustrations of this elasticity. Freedom of enterprise is the cause also of the complexity of the productive organization. The individual organizer, free to seek new markets for products and new sources of supply for wants, has spread a network of trade connections over the whole world. The managers of manufacturing firms have been free to experiment and adopt any methods of organization they found advantageous. Men of an organizing turn of mind, who have seen a defect or a need in the existing organization, have been free to establish businesses to remove the defect or satisfy the need; while the men who have not the capacity to originate have been free to copy. The place of free enterprise in the organization of production can be realized only by comparing the present system with the so-called " system of monopoly " which preceded it; occupations were the monopoly of gilds and corporations which restricted entrance to them, methods of production were dictated by State or gild officials, and the flow of trade was confined, so far as the State could control it, by prohibitive tariffs, tolls, and export duties to certain selected channels.

Defects of Competitive Selection of Organizers. — The principle which the opponents of this old " system of monopoly " sought to incorporate in the organization of society is essential to any satisfactory organization of production — the principle, namely, that production should be responsive to demand, and that individual organizers should be at liberty to experiment with new methods of production without waiting for the authorization of some Government department. The method by which they sought to secure their object was also sound — the method, namely, of relying on individual initiative and sweeping away all obstacles to its widespread exercise. Their reform, however, stopped halfway. It was a negative, not a positive reform. It swept away obstacles to individual initiative without doing much to create opportunities of initiative. A constructive statesmanship, therefore, even if it left the present system untouched in principle, would seek to supplement the negative privilege of free enterprise by providing positive facilities at the public expense for research into processes of production, methods of organization, and openings for trade, and by increasing the educational provision which is the chief aid to equality of opportunity. As things are, the system of free enterprise, with the other methods which we discussed, has removed obstacles to the appointment of the most suitable people to the organizing posts of industry and commerce without making provision to insure that they shall be appointed.

Situation in Great Britain and in the United States. — In spite of this defect, in the districts of Great Britain and the United States in which industry is most progressive, a majority probably of the responsible heads of firms have risen from the ranks, and a vast majority of firms have been founded by men who have risen from the ranks. The suitability of the small firm for the work of pioneering a new industry or new methods has provided the poor man of ability with his opportunity in some cases, a boom in an established trade in others. Latterly the growth of corporate enterprise and the extension of State and municipal enterprise have thrown open organizing posts to men without capital. Few people would maintain, however, that the best men are in every important post, or that there are no incompetent men in important positions. In judging the efficiency of the system, therefore, we have to consider not only the opportunities for the promotion of able men, but also the arrangements for removing from positions of control incompetent men. The arrangement on which the policy of free enterprise relies is failure through competition, and competition is not sufficiently efficacious.

Hereditary Selection of Organizers. — A large number of important posts in the organization of industry and commerce are filled by hereditary succession. In the private firm the son can succeed the father without any inquiry as to whether he is the fittest man for the work; hence large branches of industry are controlled by people who are put into their posts without any competition. Once in, they can be removed only by their own resignation or by failure. Through failure, under the pressure of competition, the unfit are weeded out, but the doubt is suggested whether bankruptcy is not an unnecessarily expensive method of selection. A whole countryside may be ruined, because the son of the man who built up the business on which the countryside depends was born a fool. This danger is usually averted in their own interests by people who inherit businesses which they are not competent to manage, by the promotion of subordinates to the position of partners, or by converting the business into a corporation. The elimination of the unfit organizer by competition takes time, and during the interval in which he scrapes along he may do infinite harm, and at the best will cause great waste.

Class Prejudice. — A second defect in the appointment of the organizers is the extent to which class prejudice influences such appointments. The extreme case is the appointment of "dummy" directors who receive the salary, even if they are not permitted by their colleagues to do the work, of organizers of industry. A more common but less obvious evil is the

class feeling which makes the so-called "upper-class" controllers of industry unwilling to give workingmen their fair chance. The workingman of only average organizing ability will probably get few chances of showing he possesses it; the workingman of exceptional organizing ability will not be kept back, but he has never so good a chance of promotion as the "upper-class" man of less exceptional ability. Much organizing work, the work of managing and marketing, can be reduced to a routine. Before it is reduced to a routine it requires ability of a high order, and as such commands high payment. When it has been reduced to a routine it does not require exceptional ability, but frequently secures the same payment through custom, and because the "upper-class" person who usually has it to do lives at the same rate and in the same social style as the few able men who are capable of work which is not routine. This is seen especially in the difference between starting a business and running one, between making a fortune and keeping it. The exceptional man builds up a business and makes a big income out of it: his ordinary son, who could never have built up such a business, is capable of running it, and makes as big an income out of it as his father. Only when he is below the average ability and quite unequal to the work does he incur failure; that is to say, so long as a man is born into the social class which does most of the organizing work in industry and commerce, and has merely the ordinary ability needed to maintain a traditional routine, the struggle for survival need not touch him. The owner of a large capital, who manages his business on conservative lines and chooses capable subordinates, is in no danger of losing his important position.

Effect of Inequality of Wealth. — Inequality of wealth is the great cause of inequality of opportunity, since some capital is essential to starting in business. The amount needed on an average is growing greater, and the advantages of a large over a small capital are also growing greater. The privilege which the system of *laissez-faire* allows to every one to enter into competition with established businesses is an empty one, unless it is accompanied by some means of getting the use of capital. The means exist — we shall study them in a chapter on the organization of capital — but they certainly do not make the chances equal between "upper-class" and working-class men of equal ability. Even in the large corporations, which are opening new avenues of promotion to the poor but able man, the unconscious sympathy which "upper-class" people have for one another is probably an important influence in determining the exact selection of men for the most important position. America has a great advantage over the countries of Europe in that such class prejudices have less influence, and the career open to talent is more of a reality than in more conservative countries. Dr. Marshall has explained that the workingman who practices the vices of a miser, and restricts his life's activities resolutely to the making of money, can accumulate a considerable capital; but he must have "a long as well as a strong life," and "patience, genius and good fortune" if he is to succeed. Given these conditions, he may rise enough to enable his children to rise further — if they also possess patience, genius and good fortune. But the recognition of this possibility is not inconsistent with accepting Marx's generalization that the leadership of industry is an attribute of capital, just as in feudal times the functions of general and judge were attributes of landed property.

The Corporation and Specialization in Organization. — A class of organizers similar to the business men in the present industrial system is necessary in any organization of industry which avails itself of the economies of specialization. And in the sphere of organization we can see the same specializing tendencies at work as in the rest of the field of industry. The corporation in which all organizing work is put into the hands of people who are specialized to it and is paid for by salaries, is gaining on the private firm, in which the work of organization and the taking of risk are both performed by the owner of the capital. The taking of risks can never be quite separated from the work of organization, as will be seen in the next chapter; but it is significant that salaries as a method of paying for the work of organization tend to displace profits.

CHAPTER IV

SPECULATION AND INSURANCE

I

Production as a Whole Carried on in Anticipation of Demand

Nature of Anticipation of Demand. — In the last chapter we saw that one part of the organization of production consists in buying things in one place and selling them in another. The middlemen or dealers who do this act as a connecting link between specialized districts and between specialized trades, and also as a connecting link between all kinds of specialized producers and the general body of consumers. This description, however, gives only one-half of the work of the dealer; the other half consists of the anticipation of demand, and of buying at one time and selling at another. We enter a shop, pay two dollars and a half, and a shirt is given to us. The shirt is the product of the labor of hundreds of people, the materials of which it is made were drawn from two or three continents, the machinery required to make it took months to construct; yet we get the shirt without waiting. For us to get it the shopkeeper must have stocked shirts, for him to do so the wholesaler with whom he deals must have stocked shirts, for the wholesaler to do so some one must have manufactured shirts, some one must have manufactured the flannel from which they are made and the thread with which they are sewn, and further back still, some one must have made the machinery with which all these manufacturers

work. That is to say, in anticipation of our want of a shirt, a complex organization must have been at work for months and perhaps years before we announced our want. We saw in the last chapter that a special class of organizers existed to connect the specialists up into one productive machine; we see now that these organizers do this work, *not in response to our demand, but in anticipation of it.*

Involved Character of Demand Anticipation. — We bought a woolen shirt; suppose we had wanted a cotton one. The retailer would probably have been able to supply us. The demand for the different kinds of shirts is fairly steady, and it is the retailer's business to know what to stock. But multiply our case a thousandfold, and suppose he has not anticipated our wants so exactly. What is the result then? First, he has woolen shirts which are not wanted, and all the series of people behind the counter, who have been contributing to the making of his woolen shirts, have been making something which, as it happens, is not the thing wanted. Secondly, the shopkeeper, being unable to sell woolen shirts, orders fewer, and this check to the demand for woolen shirts is transmitted right through to the people who grow wool and make woolen-working machinery. Meanwhile, we, in our determination to get a cotton shirt, leave the shop and go elsewhere for it, and the shopkeeper telegraphs to his wholesaler for a supply of cotton shirts at the same moment as we at another shop are asking for a cotton shirt. Imagine a thousand people acting as we are acting, and the people whose business it is to supply cotton shirts will get the impression that there is going to be an increased demand for cotton shirts and will place their orders accordingly. Or suppose we were attracted by a brilliant and original tie, or a new thing in suspenders, or suddenly remembered that we want a straw hat, and, having only $2.50 in our pockets, decided that the shirt could wait; then the trade both in woolen and cotton shirts would be disappointed, and we should be helping a boom in ties, suspenders, or hats. There are similar possibilities at each stage in the productive process. The wholesaler buys from the jobber what he thinks will be wanted; the jobber stocks or has ordered from the manufacturer what he thinks the wholesaler will want; the manufacturer (unless he is working to a jobber's orders) is similarly estimating what will be wanted; and the machine-maker, the laborer, the agriculturist similarly direct their efforts to making or growing what they anticipate will be wanted.

Relation of Production to Demand Anticipation. — Production is carried on in anticipation of demand. This is inevitable if we are to avail ourselves of the economies of specialization, since specialization *takes time.* When we purchased the woolen shirt we were getting goods from the Australian sheep farmer, from the Southern cotton grower, from a whole host of machine-makers, builders, transport workers and others, who could not possibly have known of our existence nor anticipated for themselves what we should want. Again, all the processes of manufacture must be carried on simultaneously. The growing of the wool, the spinning, the weaving, the shirt-making, and the distributing by merchants and shopkeepers must be going on continuously and simultaneously, or a large number of people and large amount of capital would be unemployed. The shirt which we bought was perhaps begun two years ago, and with every stage in its manufacture the materials of which it was made become more and more useless for anything except the one purpose of making a woolen shirt.

Production is carried on *ahead* of demand on an *estimate* of it. Working on an estimate necessarily involves the risk of loss when a wrong estimate has been made, and every class in the community has to some extent to meet this risk and bear a share of this loss. The consumer suffers because he does not get what he wants, or has to pay a high price for what he wants; the worker suffers because his specialized skill may suddenly lose its value. But the chief risk is borne by the class of organizers whom we studied in the last chapter. They take the first and chief loss if something is made which turns out not to be wanted. This is so because they have paid for the making of the thing before they could find out that it is not wanted; in return, they take the profit if their estimate of what is wanted turns out to be correct, so that they are able to offer the public just what it wants and is willing to pay for handsomely. They are the class in industry whose business it is to anticipate demand, to divine what will be wanted and how much of each thing will be wanted, and their profits and losses depend as much on the correctness of their anticipation as they do on the skill with which they organize specialized producers. This side of their work is emphasized by the French term for the person who organizes production, *entrepreneur*, which implies undertaking production for the market with its attendant risks.

II

Speculative Dealing

Universality of Speculation. — There is thus a speculative element in all business, due to the fact that it is carried on *ahead* of demand on an *estimate* of demand. When, however, we speak of *speculation*, we do not as a rule refer to this anticipation of demand. We should not call the action of a retailer in stocking his shop "speculation," although there is in it the risk that the public will not want the stock he has selected. By "speculation" we mean the kind of business carried on by the dealer in cotton or wheat, and the word carries with it a suggestion of socially harmful action. A study of the nature and social effects of this speculation will throw light not only on the trades in which it is carried on, but on the organization of production as a whole.

Nature of Speculation. — The essence of speculation lies in forecasting price movements and then buying or selling for a profit. Having made his forecast, the speculator buys if he thinks prices are going to rise, sells if he thinks prices are going to fall. He looks to the future and works on an estimate; he takes the risk of loss if his forecast is wrong in return for the chance of gain if his forecast is right.

Social Effect of Speculation. — To discover the social effect of his action, it is necessary to inquire what he bases his forecast on, or, in other words, what are the influences that cause price movements. These influences are changes in the supply of the commodity he is dealing in and changes in the demand for it. He forecasts price movements by anticipating what the changes in the supply of the commodity or the demand for it are going to be: an increase in the supply or a falling off in the demand will cause prices to fall, a shortage in the supply or an increase in the demand will cause prices to rise. Hence the anxiety with which all the influences that can affect either the supply of or the demand for any of the staple commodities of commerce are watched and reported; the prospects of rain in Australia, on which the wool clip so largely depends, frost in the cotton belt of the United States, the weather in wheat-growing regions, are all under constant observation, and a steady succession of estimates of the coming yield in these regions is sent to the marketing centers. Similarly the demand is watched; the prospects of trade in all departments are the daily study of thousands. Every daily paper has a considerable proportion of its space devoted to market reports, in which all the information is given which the paper can collect bearing on the probable changes in the supply of, and the demand for, the chief staples and local products.

Operation of Speculation. — Let us suppose that the dealer's forecast is correct. Anticipating a shortage with no corresponding falling off in demand, he expects prices to rise; he therefore buys, intending to sell at a profit when the prices have gone up. His buying tends to send prices up *now*, higher prices *now* check consumption *now*. Hence present stocks are not exhausted so rapidly; some is saved for future use, and so eases the pressure on the short supply which our speculator rightly anticipated; in that way prices are prevented from rising so high as they would have done but for his action. Or suppose he anticipates an increase in supply and a consequent fall in prices; he sells forward (*i.e.* he offers goods for future delivery at a price lower than the price at which they can be obtained for immediate delivery); his selling now tends to bring prices down, the lower prices stimulate consumption at once, so that present stocks are cleared and are not there to cause a glut when the big supply, which the speculator anticipated, comes into the market. Similarly, he will buy in anticipation of a rising demand, sell in anticipation of a falling demand; his action affects prices, so that a *sudden* change in demand does not produce a *sudden* change in price. It is, of course, the cumulative action of a large number of dealers in a sensitive market that has this effect.

Influence of Speculation on Prices. — Speculation, then, buying and selling for a profit on a forecast, tends, if the forecast is correct, to lessen price fluctuations, by averaging supply and demand over a long period. The speculator, by varying prices, stimulates and checks consumption, *always ahead* of the change in supply or demand. This is a social service, provided that price fluctuations are inevitable, since sharp price movements mean fortunes for a lucky few, bankruptcy, unemployment, and distress for the many; the interest of the community lies in *steady* prices. The speculator corresponds to the governor on a reciprocating steam-engine.

Effect of Erroneous Forecasts. — It follows that, if the speculator's forecast is wrong, his action will be socially harmful, since it will accentuate price fluctuations. If, for instance, he sells, thinking that prices are going to fall when they are really going to rise, his selling will for the moment tend to force prices down and stimulate consumption, so that when prices do go up they will go up higher than they would have done but for his action; and *vice versa*. Hence speculation, if it is to perform a social service, must be confined to specialists who are not likely to be wrong in their forecasts; the outsider coming into any market is a social nuisance. Society is not entirely defenseless against incompetent speculators. If the forecast is wrong, the speculator makes a loss and sooner or later fails; but so long as he continues to operate he is a dangerous nuisance, and in his ruin, when it comes, he will probably involve others. Dealers, of course, do not look at themselves in this way. They look at their business simply as buying at one price and selling at another. They look at their business from the point of view of the individual, while we are looking at it from the point of view of society. From the points of view of both individual and society the speculator's profit is a difference in price; from the social point of view, however, the important thing is that the speculator's action tends to lessen the price fluctuations out of which he makes his profit.

Necessity for Speculation. — Are these price fluctuations then inevitable? It is only if they are inevitable that the speculator's action is necessary and his profits at all justifiable. In the present state of science, and in an organization of industry that avails itself of the productive economies of specialization, it must be said that they are inevitable. They are due to two main causes which we will consider separately, fluctuation in demand and fluctuation in supply.

Speculation and Fluctuating Demand. — Fluctuation in demand occurs because *what* people want and *how much* they want is always changing. It changes with fashion — the " hobble " skirt almost halved the demand for certain important classes of textiles; it changes with the weather — a wet summer reduces the demand for muslins, silks, and flannels, while it increases the demand for waterproof fabrics; it changes with the general changes in prosperity. A war will cause a sudden and enormous demand for blankets, khaki, socks, boots, besides armaments, a demand which ceases just as suddenly when the war ends. Strikes and lockouts are a similar influence of less importance. The demand for one commodity is influenced by its substitutes: when wool is dear, the demand for cotton will increase; when cotton is dear, the motive for substituting it for more expensive fibers will be weakened. Industry cannot wait until demand has expressed itself, methods of industry being so round-about and prolonged. Production is carried on *ahead* of demand on an *estimate* of it; some one has to make that estimate; that " some one " is a speculator.

Speculation and Fluctuating Supply. — More important, however, to the speculative dealer are fluctuations in supply, and speculation, in the narrow sense of the word, is found chiefly in the trade in raw materials such as cotton and wool, and foodstuffs such as wheat, sugar, coffee, where fluctuations in supply are greatest. They are greatest here, because the supply is not altogether under man's control; man may decide how much land to sow or plant, the weather will decide what product the land will yield. Moreover, the supply of these commodities does not come into the market in a regular and even flow; it comes in gulps, after the harvest in each producing region. The demand, on the other hand, is continuous and fairly regular; for industry must be continuous. Cotton mills need cotton every month of the year, although cotton is harvested only two or three months in the year. Similarly, people want food all the year round, even though food is being harvested in one region during only a few weeks in each year. These two characteristics of trade in produce, the effect of weather and other natural influences on the amount of the supply in any year, and the seasonal or irregular nature of the supply as compared with the continuous and regular nature of demand, explain the speculative character of produce-dealing.

The importance of changes in the supply of, and the demand for, commodities is due largely to the fact that they are immediately reflected in prices; and the prices affected are not merely those of the raw material, but also those of all the commodities into which the raw material enters. A change in the supply of wool will affect the values not only of stocks of wool, but of tops, yarns, and pieces; a frost in Texas will cause an immediate rise in the prices asked not only for raw cotton in the United States, but for raw cotton in Lancashire and for yarns and pieces. Thus a change in values often occurs between the commencement and the completion of a single process of manufacture. A spinner may buy tops to spin, and, when his yarn is complete, find the value of it enhanced by the fact that wool has gone up; a top-maker may buy wool in Sydney at one price, and get it to America only to find that some change in the conditions of the market has brought prices in the United States notwithstanding high tariffs almost to the level at which he bought in Australia.

Specialization and Risk. — Specialization, then, introduces two inevitable risks into production which are absent from the primitive system under which each household produces the bulk of its own needs. The first is the risk that the estimate of the demand on which producers have acted will be wrong; the second is the risk that some change in supply, occurring after a process of production has been begun, will lower prices, so that the value of the product when completed will be less than the cost of production. The first risk arises from the fact that specialization takes time, so that production has to be carried on in anticipation of demand; the second arises from the fact that industry, to be economical, must be regular and continuous, while the supplies of the most important raw materials are irregular and discontinuous. The risks mean occasional loss, the chances of profit are presumably equal. If the person who undertakes the risks can anticipate correctly the movements of demand and supply, he will always make profits and no losses. The profits of the dealer are the payment society makes for the work of anticipating demand and supply.

Elimination of Risk. — It is conceivable, though unlikely, that these two risks involved in the organization of production on a basis of specialization might be eliminated. The risk due to fluctuation in demand could be eliminated by carrying on all production to order: we should not go to a shop and buy a woolen shirt, we should order it three years before we wanted it, in order that the wool producer might increase the supply of wool and other producers their facilities for handling it. To state this alternative is to show its inconvenience. The risk due to fluctuations in supply could be overcome by accumulating and maintaining a reserve or reservoir of produce from which to meet and regularize natural fluctuations in supply; this method was applied by Joseph to meeting the difficulties of Egypt under Pharaoh. The expenditure involved in establishing such a reservoir, however, and the capital tied up in it, would be enormous, making it possibly more expensive than the present system, and the existence of such a market for their produce might tempt growers to produce in excess of society's normal requirements.

III

The Use of Contracts to Shift Speculative Risks on to the Shoulders of Dealers

Contracts and Risk Elimination. — The risks and profits of anticipating supply and demand are not taken by all businesses alike. By the use of *contracts* the risks of incorrect anticipation can be concentrated at a few points, so that most of the people in an industry know nothing about them and are enabled to work as if they did not exist. An industry as a whole cannot work to order, but any firm in an industry and even whole stages in it can. By working only to contract a large number of firms, so to speak, " contract out of " the risk due to price movements, leaving other firms to specialize in forecasting these movements, and to bear the risks attaching to them in return for the profits to be obtained by correct anticipation of them.

Middlemen as Risk-takers. — The tailor will keep only a small stock of cloth, but a large number of patterns; he will buy the cloth only when the customer has chosen his pattern. Manufacturers in the worsted industry complain that wholesalers try to do the same, buying only when they have an order, and thus throwing on the manufacturer the burden of meeting fluctuations in the demand. The manufacturer in some cases, however, never makes for stock; he weaves patterns and sends them out, and manufactures pieces only to order. The spinner usually spins only on contract, *i.e.* the price which he is to receive and the amount he is to make are settled before he buys his material. But in every industry we reach at some point a stage or a group of firms which cannot wait for orders and then buy just sufficient raw material to meet their requirements at a price leaving them a profit; they cannot, because they draw their material direct from Nature. They have not a continuous supply to draw on; they have to buy when the harvest comes, without waiting for orders. They may buy up in the course of two months a year's supply of raw material. Again, the manufacturer, having got his order, can cover himself against loss due to a rise in the price of yarn before he has completed his order, by giving a contract now, while prices are at a level that insures him a profit, for all the yarn he will need; the spinner can cover himself against the same risk of loss by giving a contract for his material

as soon as he has got his order for yarn. But again there are firms that cannot cover. In the worsted industry the topmaker undertakes to supply tops or wool at any time of the year, but he cannot *buy* at any time; he has to buy when the wool comes off the sheep's back, and the bulk of the supply is crowded into three months of the year. And behind him the farmer cannot wait for orders and limit his production to the amount of his orders, since the amount of his product depends so largely on the weather. By working to contract, and covering themselves by giving contracts for their materials, those firms that can do so forego the chance of gain from price fluctuations in return for security against loss from price fluctuations. The fluctuations remain, the risks and chances from which they contract out are not eliminated. What happens is that the risks of loss and the chances of gain are concentrated on the shoulders of middlemen — retailers and merchants at one end of the productive process engaged principally in anticipating demand, dealers at the other end principally in anticipating movements of supply.

Thus the use of contracts enables one of the great drawbacks of specialization, namely the risks which it introduces into business, to be counteracted by a further application of the principle of specialization, namely, the specialization of dealers to the work of anticipating and bearing those risks. Even where a single firm undertakes both the organization of the processes of manufacture and the work of anticipating and bearing the risks of the market, the tendency to-day is for the two pieces of work to be put into different hands. The former is done to an increasing extent by salaried employees; the latter tends more and more to be the special work of the head of the firm, assisted by other salaried employees. These make it their business to collect all possible information as to the supply of, and the demand for, the goods in which they deal. They acquire a special knowledge of the possibilities of public taste and fashion, of the sources of the raw material, of all the special risks incidental to the trade; and they can allow for all the special risks in quoting a price for goods to be delivered some time in the future. They could not give the reasons for their decisions; but their judgment has the same ground of special experience that the skill and judgment of any other specialized worker possesses.

Influence of the Market. — They are helped by the organization of trade in markets. A market was originally a place where buyers and sellers could meet. To-day they may still meet in a customary place, but cheap traveling and cheap communication have made the market-place no longer essential to business. The trade in every important commodity has a whole apparatus of aids to right judgment of the chances of the trade. The Exchange is the most important of these, where is concentrated the latest information as to quantities, prices, and sales, and rules are enforced to make business as simple and open as it can be made. The trade newspaper, or the business columns in the local newspaper where a trade is localized, give some information. An important part of the work of the government consular service is to keep business men posted in the wants and needs of foreign markets. And every trade includes in its working army a corps of scouts or skirmishers in the form of agents, travelers, and others who are in constant touch with customers, finding out the nature and extent of their future demand. What is called specially the " business side " of a firm is the machinery which society has devised for anticipating demand, since specialization requires production in anticipation of demand.

Example of Risk Distribution. — A comparison of the chief textile industries will illustrate the tendency to specialization in risk-taking. In the cotton industry, which is the most advanced, the degree of specialization is very great; manufacturers and spinners as a rule work chiefly to order, and contract for their raw material at the same time as they take the order for their product; the risks due to price-fluctuations are taken almost wholly by dealers in the raw cotton and by distributors. In the woolen industry, the least advanced, there is little specialization. It is usual for a firm to undertake all the processes of manufacture, and for the manufacturing firm to take the risks of dealing. In the worsted trade, which occupies an intermediate position between the other two, the risks are fairly widely shared, but there is a tendency for them to concentrate on middlemen, especially on the top-makers, the dealers in the raw material. The top-maker may buy direct from Australia, risking a fall in values while the wool is in transit. He buys his stock in large quantities during comparatively restricted seasons; he will sell at any time. He will contract to supply spinners at any time, but he cannot get any one to contract to supply him. He needs a high degree of technical knowledge to deal in the wool, but his profits are chiefly obtained from forecasting price-movements.

Now this tendency for speculation to concentrate in the hands of dealers is in accordance with the general tendency of economic development for work to be specialized; the dealers are in constant touch with the market at many points, and they have no mill to manage. It is a desirable tendency, since we have seen it is essential if speculation is to perform a social service, that it should be well done, that the speculator's anticipations should be accurate; and this can be secured only by people specializing in speculation. Moreover, different qualities are needed for dealing and for manufacturing, and the best organizer of a mill is not necessarily the best judge of price-movements. The reason that the tendency is not more general is that speculation, when successful, pays. The successful anticipation of price-movements is the quickest way of making a fortune offered by the modern economic organization, and manufacturers are loath to relinquish the chance of such gains, even in return for security against loss. Hence, to take the same example as we took before, in the worsted industry only combers and dyers, who work exclusively on commission, and commission spinners and commission manufacturers, keep absolutely clear of the speculative field; they have their own risks, from trade fluctuations, but they are not concerned with the gains and losses that come from price-fluctuations. Spinners and manufacturers, who have the capital to do it, although *as a rule* they work to order and contract for their raw material, are usually open to buy up raw material when it seems cheap, and to work for stock when orders are not coming in. Both operations are speculative, since prices may change between the time when they buy the raw material and the time when they have completed their product; if prices rise they will make a profit over and above the normal profit of manufacture, if prices fall they will make a loss. It is because speculation is so much more specialized in the cotton trade than in the worsted trade that corporations are so much more common in the former than in the latter. Corporate enterprise, as we shall see in the next chapter, is well adapted to the conduct of the manufacturing operations of a trade, while the private firm is more suited to dealing with its speculative element; in the cotton industry manufacturing operations and dealing are kept apart, in the worsted industry they are often combined.

IV

Terminal Markets for Dealing in Futures

Nature and Influence of Future Markets. — A refinement of speculation, leading to a further concentration of risk-taking, exists in the terminal markets for dealing in futures, which are now found in connection with the trade in many raw materials and foodstuffs. Their nature will be understood best perhaps by an account of a single one of them. In England you can buy tops for future delivery, but you will have to take delivery; in Roubaix-Tourcoing, the chief French woolen center, you can buy the standard top for delivery any month up to twelve months ahead, and, at any time before delivery becomes due, cancel the contract by paying (or receiving) the difference between the price at which you made the contract and the price at which the top stands now for delivery in the month of the contract. The essentials of this organization for dealing in futures are an official price-list, a class of brokers, and a clearing-house and bank. In Roubaix-Tourcoing the list is published after morning and afternoon business; it gives the price at which the standard top can be bought for delivery any month up to twelve months ahead, and is based on information of business done which is supplied by the brokers. The brokers are bound to give this information; they are not allowed to buy or sell on their own account. The clearing-house with which all transactions on the market have to be registered is called the *Caisse de Liquidation et Guarantie*, and it controls the market by guaranteeing that accounts shall be paid. The unit of dealing is the *filière*, or "lot" of five thousand kilograms.

Buying Futures. — Suppose I wish to buy futures. I must act through a broker, who finds a broker acting for some one wishing to sell; buyer and seller must both through their brokers register the transaction with the Caisse, and must both within twenty-four hours make a deposit with the Caisse of 1000 francs per filière. Then every time the list shows a change of five centimes per kilo, either the buyer or seller must pay in to the Caisse the difference; if the price has gone down, the buyer pays; if it has gone up, the seller pays. For example: I buy 5000 kilos for delivery in October at 6.10 francs per kilo, and deposit 1000 francs. Suppose the price falls to 6.05 francs, I pay in to the Caisse the difference (250 francs). The value of the tops to which I am entitled in October is now only 6.05 × 5000 francs; I have contracted to pay for it 6.10 × 5000 francs; therefore, to insure my ability to pay, the Caisse insists on my depositing the difference. The price rises to 6.10 again, and I withdraw my 250 francs. It rises still further to 6.15, and the seller has to deposit 250 francs; he has contracted to deliver tops in October in return for a payment of 6.10 francs per kilo, he will not be able to get them for less than 6.15 per kilo; he must therefore provide the difference. The result is that when October comes there will be in the Caisse not only the original deposit but also an additional deposit, equal to the difference between 6.10 francs per kilo (the price at which the contract was concluded) and the current (or "spot") price for the top. If the current price in October is higher than 6.10 francs, the seller will have deposited the difference, and with this deposit and the 6.10 × 5000 francs which he will receive from the buyer, he will be able to pay the current price for the tops and deliver them. If the price is less than 6.10 francs, I, the buyer, shall have deposited the difference, and having this deposit at my disposal shall be able to pay 6.10 × 5000 francs, although the tops are not worth that sum at the current price. The essential thing in this arrangement is not the original deposit (which is merely an additional security for solvency, required on this particular market) but the regular payment of "differences" *as they occur*. On this account, it is the exception to take delivery; nearly always, some time before delivery becomes due, the buyer accepts or pays the difference due to him or from him and cancels the contract. What the buyer buys is not so much wool to be delivered in October, as security against loss from an unfavorable movement of prices between the time when he makes his contract and October; the transaction in fact is a kind of insurance. This will be clearer if we consider who use the terminal market.

Selling Futures. — The sellers of futures are usually either importers of wool or manufacturers or spinners working for stock. Their object is to hedge. The importer, having bought in South America, is anxious to protect himself against the loss he would suffer if prices fall while the wool is in transit more than he has allowed for in deciding what price he could pay. He therefore wires to his representative at home to sell futures for the month when his wool will have reached Roubaix. If the prices have fallen by the time the wool reaches Roubaix, his loss on the sale of it will be balanced by a gain on his future transaction, for prices will have fallen in the futures market as well as "spot" prices, and the person who bought his future will have to pay him the difference. Similarly, a manufacturer working to stock will sell futures; then if prices fall to such an extent that they do not cover his costs and he has to sell his product at a loss, he will have his futures transaction to compensate him, since there will have been a corresponding fall in prices there, and the buyer of his future will have to pay him the difference. Of course the hedge is not complete, and such as it is, it is secured only by sacrificing the chance of a gain from prices going up; but where large operations are being carried on *on a limited capital*, the security obtained by this method will usually lead to its adoption. The buyers of futures are merchants and top-makers of different kinds who have contracted to supply wool, tops, or yarn for some time ahead. They "cover" themselves by buying futures to an equivalent amount and for the same time ahead as their contract. Then if prices rise more than they anticipated and they have to pay for the wool, tops, or yarn more than they will get under their contract, the loss will be covered by the profit they will realize on their futures owing to the rise in prices. Similarly, spinners and manufacturers will sell futures, if they do not wish to give a contract for their raw material, and yet wish to cover themselves from loss due to a rise in prices. None of these buyers probably will take delivery of the tops they have bought when the future matures, because the top which the seller can tender may not be suited to their purposes; they will simply take the difference — and it will enable them to purchase without loss the exact kind of wool, top, or yarn they want. All these buyers and sellers sacrifice a chance of gain to insure against a possible loss.

The Professional "Future" Dealer. — There is yet another class of buyers and sellers. The importers, spinners, and manufacturers, who avail themselves of the terminal market to insure themselves against loss from price-fluctuations, have not abolished those fluctuations; if they do not take the risks, some one else must. The most important persons in future dealings are those dealers who act as middlemen between the buyers and sellers described above. They are always willing to buy or to sell, provided they can get their price; hence it is they who really fix the prices of futures. They make a living solely by forecasting movements of prices, and buying or selling to make a profit. Their work is speculation pure and simple, since they never use the material in which nominally they deal. Their work represents the highest degree of specialized risk-taking, and is justifiable, since their buying and selling will tend to even price-fluctuations, so far as the forecasts on which their profits depend are accurate.

Futures and Gambling. — Thus a futures market concentrates at one point, almost one might say on one price-list the forecasting of price-movements. It tends to concentrate the work of speculation on one class who do nothing else, enabling the manufacturer, distributor, and importer to cover themselves or hedge against any loss from price-fluctuations. The advantages of the institution are obvious; its disadvantages are equally obvious. It makes the separation between the speculative side and the technical side of dealing so complete, that outsiders, who have no technical knowledge of the trade and no stake in it, are able to come in and speculate. By substituting the payment of "differences" for the payment of the full price of the commodity dealt in, it provides a further encouragement to outsiders to come in and gamble, and tempts dealers with small capitals to undertake operations that require for safety a larger capital than they possess; it is in fact an encouragement to gambling. At the same time this economy of capital is a great advantage, since the moving of cotton for example from the United States to Lancashire is such a large operation and crowded into such a short space of time that it could hardly be carried out on a basis of full money payments. The existence of the price-list results in "unofficial" speculation outside the organized exchange or market, out of their control and subject to none of the strict regulations imposed by them to prevent gambling. Finally it is alleged that organized future dealings, by making the market more delicate and sensitive, make disturbance more easy and facilitate the artificial price-movements of which we have to speak in a moment. It must be remembered, however, that speculation is not confined to futures; it is inherent in all trade. The futures market merely concentrates, and perhaps multiplies it. There is as much speculation in the worsted industry in Bradford, which will have no terminal dealing, as in Roubaix, which has organized and clung to its "terme" in the face of the persistent attacks of other French woolen centers.

V

Illegitimate Speculation

Test to be Applied. — Having described the nature and effects of speculation in general, we are now in a position to discuss what kinds of speculation are illegitimate. Two preliminary observations may be made. Mere buying and selling by people who neither produce nor use the material dealt in is not necessarily illegitimate; as we have seen, the buying and selling of an expert, who accurately forecasts the movement of prices, has the effect of lessening the price-fluctuations out of which he makes his profit. Secondly, we cannot at present look for a canon of legitimacy to the motive of the speculator. He is often neither conscious of, nor interested in, the social effects of his action, looking only to his private profit; he represents his business to himself as merely selling at one price and buying at another, and the margin between the two that he aims at can be secured by hurting as well as by serving society. It is the effects that justify or condemn speculation.

The "flyer." — We can begin by declaring illegitimate and wrong any speculation by the outsider. Every material dealt in requires careful study, and the outsider who has not made this careful study is not likely to estimate accurately the force of the different influences affecting its supply and demand. If his anticipations are wrong, his action will accentuate instead of lessening price-fluctuations, and may upset the calculations of legitimate dealers who have given all their time and efforts to studying the material. The outsider then, who comes into any market to speculate, is a social nuisance. It should not be necessary to state this, but successful speculation is so profitable that people are tempted to ignore the dictates of common sense.

Adequate Capital. — The second kind of illegitimate speculation that we can distinguish is dealing on insufficient capital. A dealer should obviously not engage in transactions so great that, if his forecast of prices is wrong, his loss will amount to more than his capital. If he does, he is risking bankruptcy, which will involve others, on the chance of making a fortune; if his forecast turns out to be correct, he rakes in big profits; if it is wrong, he is unable to fulfill the obligations which he contracted, and is not only ruined himself — it is perhaps as well that he should be — but involves in his ruin others who had relied on his contracts. Expecting

a fall, he sells forward; a rise instead of a fall in prices takes place, and he is unable to deliver the goods which he sold and on which his customers are relying. It is this kind of dealing on insufficient capital that is chiefly responsible for the evil associations of the word "speculation." It is a variety of the old game of "heads I win, tails you lose."

Manipulation. — The third, and worst, kind of illegitimate speculation consists in producing artificial price-fluctuations. Industry as a whole, we have seen, is carried on not in response to demand — with the price to be received for the product settled before the production is begun — but in anticipation of demand, with the price a matter of uncertainty till the whole process of production is completed by the transfer of the product to the consumer across the shop-counter. This fact forces upon industry the need of forecasting the movements of prices, in order to prevent an expenditure on producing a thing greater than the price which the thing will fetch when produced. This forecast is made on the assumption that prices are the outcome of the interaction of supply and demand. It is assumed that a rise in price indicates either a coming shortage in supply or an increase in demand, a fall in price either an increase in supply or a falling off in demand; if the assumption is not justified, business becomes the merest guesswork. Price is the indicator that business follows.

Evils of Manipulation. — Now it is possible to falsify this indicator, and to produce price-movements which are not the outcome of the interaction of supply and demand. This is done in two ways; first, by spreading false reports as to the state of supply or, less frequently, of demand; second, by buying or selling in direct opposition to one's forecast of price-movements in order to accentuate price-fluctuations. For example, an operator, or syndicate of operators, who believe that prices must go up owing to a coming shortage in supply, will spread reports that there is going to be a glut or a falling off in demand. This will give the impression that prices are going to fall. But more effective than any report in creating that impression will be their action in the market. By sudden and extensive sales forward they will force prices down; other people, who would normally have followed the indications of the market and bought for a rise, will think that the operators are acting on private information and will therefore follow their example and sell, thus helping to force prices still lower. Meanwhile the syndicate will secretly have been buying up all they can get; when prices have been forced down as far as they are likely to go, they will buy openly also, and perhaps be able to secure a large portion of the entire supply for months ahead. As a result of the shortage which they foresaw and which now operates unchecked, prices will rise high; as a result of the syndicate's sudden and extensive buying they will rise higher than would otherwise have been the case, and the syndicate's profits will consist, not merely of the margin between the price ruling when they foresaw the coming shortage and the price ruling when that shortage began to be felt, but of the much wider margin between the level to which they artificially depressed prices and the level to which they artificially raised them. Such action is easiest in a terminal market where the operators will not have to pay the full price of purchases or deliver the goods when they sell, and its possibility is a strong argument against making speculation too easy; it is possible, however, and it is done in ordinary commerce where there are no terminal dealings. Morally the action of falsifying the indicator which business follows is precisely the same in kind as the action of the wrecker who falsifies coast lights to mislead ships; it is infinitely worse in degree.

Stock Speculation. — The last kind of speculation, which would seem to be illegitimate, is speculation that cannot have the effect, which legitimate speculation has, of adjusting supply to demand. On the produce exchanges supply, we saw, is not a fixed amount, but a flow that varies in volume; by raising and lowering prices speculators check and encourage consumption, and in that way secure that supply shall be "averaged" from one period to the next, with the result that price-fluctuations are lessened. This action is necessary, only because the supply is an irregular flow; if the supply were a fixed amount, there would be no need, and therefore no social justification, for speculation. The latter would seem to be the case in two important fields of speculative dealing, namely, Stock Exchange Securities and Land. Of course the floating of *new* companies and the issue of *new* shares to meet what is thought to be an unsatisfied need in industry involves risk, the same risk as attaches to starting any new business; since new businesses must be started, and the risk is inevitable, the bearing of this risk is also inevitable, and a social service, and the profit obtained in the subsequent sale of these shares represents a payment for something done. But the Stock Exchange exists to facilitate, not the starting of new companies, but the buying and selling of shares in established companies, and what service to society is performed by the man who buys shares at one price and sells them at a higher price a little later it is difficult to see. Dealing with shares has no influence in adjusting supply to demand, because the supply of shares of any company is a *fixed amount*, not an irregular flow. Land is similar; so far as dealing with land can be separated from the work of developing areas, which without that development would remain unused, land comes into the same category as shares. Its supply cannot be affected by changes in its price, seeing that it is not a flow, but an amount more or less fixed by nature. A middleman may perform a service by bringing together buyers and sellers who otherwise might have had difficulty in finding each other; but speculation in land, the buying up of land in anticipation of a rise in its value, is of no service to society. This has been recognized on the continent and in England by the imposition of special taxation on profits made from the sale of land; tax authorities generally might very well consider the desirability of imposing a similar tax on the "unearned increment" of Stock Exchange Securities.

The State and Speculation. — A word may be permitted on the attitude of the State towards speculation on produce exchanges. Legislation is of little use as a check on illegitimate speculation, since it would be so difficult to devise a check on illegitimate speculation which would not act equally on the socially necessary speculation of legitimate dealing. The most practical check on illegitimate dealing lies in the diffusion of a feeling that the practices described above are dishonorable, and the men who practice them dishonored. And the chief aid to establishing such a feeling is a clear understanding of what kinds of speculation are necessary and legitimate, and what kinds are socially harmful. The State can help also by increasing the amount of information available for forming a judgment of available and future supplies—international action may be necessary to secure this end — and by making all business transactions as open and public as possible. Speculation on the Stock Exchange on the other hand could easily be stopped by any government that wanted to stop it.

VI

Insurance and Other Methods of Meeting Risks

Nature of Insurance. — Another method that society has evolved of meeting risks and minimizing the inconvenience of unexpected happenings is the method of insurance. Whenever a risk is regular enough for the loss to be calculated, where the loss is likely or certain to come at some time or other, it can be distributed over a number of years in the form of a small regular payment, and can be charged on the cost of production. It is known, for instance, how often on an average a mill is burnt down. Usually the loss involved would ruin the business; but actuaries can calculate how much must be set aside each year to meet such a loss; and when spread over a number of years the loss is not crushing. By this method of averaging risks over a number of years an individual can provide against ruin from the greatest disaster. But he would find it very expensive, and most risks are insured coöperatively; a large number of individuals contribute to a single fund from which all can be indemnified in case of loss. Where a large number of individuals pool their risks in this way (by taking out policies with the same insurance company) the contribution which each need make towards the insurance fund is much smaller than it would be if they provided against the risks separately; for the chances that a number of firms will, say, all have their mills burnt down is much smaller than the chance that one will. Insurance is sometimes compared with gambling; it is, in fact, the very reverse. The gambler converts a certainty into an uncertainty — the certainty that he has his money, into the uncertainty whether he will have more or less in the future. The insurer converts an uncertainty that he will be able to meet his obligations in the event of a possible misfortune into the certainty that he will. But while we can insure against loss by Burglary, Bursting Boiler, Accident to Person, Property and Plate Glass, Diseases (specified or unspecified), Forged Transfer, Violation of Trust, as well as Fire, Death, and the necessity of compensating an injured employee, the chief risks of business are not capable of actuarial calculation, and have to be met by the specialized instinct of the business man.

Combination and Risk Elimination. — The desire to abolish risk, to remove the uncertainty of getting a supply of materials at a uniform price, and the uncertainty of getting a market for products at a remunerative price is the motive of some very important tendencies in business organization. Firms engaged in manufacturing are reaching forward to the consumer, and backward to their raw material. The big steel firms have acquired their own iron deposits and their own coal mines. In this way they safeguard themselves from disadvantageous fluctuations in the price of their raw material. Clothing and shoe manufacturers are opening their own retail shops; by so doing they get into direct contact with the consumers of their products and hope to anticipate their demands more accurately. Probably the desire to "steady" business, to prevent the recurrence of slump and boom, of underproduction and the feverish effort to take every advantage of an increase in demand, is a chief motive in those combinations of competing firms which are the most striking feature of recent industrial history. A combination *may* secure a monopoly, but without securing monopoly, it can benefit its members greatly by letting them know definitely how much is being put on the market. Nothing is so disturbing to the business man's calculations as an unexpected "dumping" of goods on the market by a competitor. That can be stopped, if all the competitors combine to regulate the output of the whole trade.

Risk and the Nature of Demand. — One other consideration must be mentioned before we leave this subject. Much business is routine. Our demand for the most important commodities — as distinct from the supply of produce — is stable, and can be easily anticipated. Where it is unstable, where it is likely to be influenced by fashion or whim, we are very willing to be led; and the people who lead us are the people who have to anticipate our wants. Even when we refuse to be led, when our probable demand is most incalculable, the task of anticipating it does not fall on every one in the trades that supply our wants. In each trade a few big firms, a few prominent personalities, lead; the estimation of future demand is the work of a few people; the great bulk of business men are content to follow their lead. The big fortunes

of trade are made by leaders, the men who foresee what is going to be wanted, and have it ready when it is wanted. But a large number of little fortunes can be made by their less enterprising and less far seeing followers who settle in the trade when they have opened it up, who content themselves with supplying, at a moderate profit, the things which are always wanted, and wanted in about the same quantities.

CHAPTER V

CAPITAL AND ITS ORGANIZATION

I

Functions of Capital in Modern Industry and Commerce

Nature of Capital. — It should be obvious by this time that a society that avails itself of the economies of the division of labor must have "something in hand"; it must have some store of saved-up wealth which it can use to aid it in further production. Wealth saved up and used for this purpose is called capital. Any wealth may be used as capital, provided it fulfills this condition — that it is used, not by the final consumer, but by some producer to aid him in his productive work. Capital has three chief functions in an economic organization like the present one — (1) in the form of tools, instruments, "plant," it makes man's labor on Nature infinitely more productive than it otherwise could be; (2) in the form of stocks of goods, articles ready for consumption in warehouses and shops, materials awaiting manufacture, and so on, it enables us to adopt the roundabout and very productive methods of production to which specialization leads; if society was living from hand to mouth and had no savings, no store of wealth to aid it in further production, every member of society would have to occupy his whole time in digging and hunting for bare food; and (3) in the same form it enables us to take risks — to produce in anticipation of demand instead of waiting for orders, to experiment with new processes, new materials, new markets, whenever we think there is a chance of our gaining by taking the risk.

Importance of Capital to the Individual. — Such are the uses of capital to society; to the individual business man its services are even more obvious. The manufacturer must have his factory, his machines, his power plant; these are all so much fixed capital. He must have constantly a large supply of raw and partly manufactured material, which brings him nothing in until it is finished and sold. He needs some capital to meet the fluctuations of his business; normally he may meet the expenses of his present manufacture with the proceeds of the sale of past manufacture, but the receipts may lag a little while the expenses continue and he must have something in hand, some working capital, to cover this margin. Similarly the middleman must carry some stock; his business is to have things where and when they are wanted; he must therefore stock them in anticipation of demand; the retailer's stock corresponds to the manufacturer's plant. In wholesale trade, stock is less important than formerly; the telegraph, the telephone, and the railway make it less necessary. The merchant undertakes to supply his customers with anything in his line that they want. Though he has undertaken to supply it he has probably not got it; the modern merchant does not buy and then sell, he more frequently sells and then buys. He does not buy things on the chance of selling them, he likes to be sure of his market before he commits himself to any buying. His specialized knowledge consists in knowing where things are wanted, and where they can be got, in foreseeing how much will be wanted and how far the supply will go. Thus he is constantly undertaking to supply goods and then covering himself by buying; his constant endeavor is to be fully covered without having overbought. So long as he is quite successful in this endeavor, he uses his capital for such purposes as giving credit to customers while he has paid cash, meeting bad debts, and taking advantage of any offers of goods so cheap that they are worth taking, even though he may not at the moment know of any market for them. But he cannot be *sure* of being able to cover himself immediately. He may make a contract to supply goods at a certain price and then, owing to some change in the conditions of the market, be unable to buy them except at a higher price. As we have seen, it is his business to take such risks. He relieves his customers of some of the trouble of watching the market, he gives them their materials at a steadier price, and in return he makes them pay him rather more than he, specializing in watching the market, can, as a rule and on the whole, get them for. Obviously, however, these risks can be taken only by a man with some capital.

Granted, then, the importance of capital, the questions arise: Who controls this capital? What security, if any, have we that it is in the hands of the people who can use it most effectively? What organization exists for collecting it and putting it at the disposal of the organizers of industry and commerce? So essential is capital to modern business that these questions really amount to the same thing as an inquiry into the different types of business organization, the different legal forms a firm may take — an inquiry we have already begun in considering how the organizers of modern industry are appointed.

II

Conditions Requisite for the Accumulation of Capital

Capital and Saving. — There is only one way in which either society or individuals can accumulate capital, that is, by consuming less than they produce. A modern society, if it is in a healthy economic condition, lives well within its income; consequently it starts each new year with a bigger supply of tools, machines, materials, and wealth ready for consumption than it did the previous year. But there is nothing inevitable or automatic about this accumulation of wealth. Many individuals and most governments live beyond their income; governments are particularly bad offenders, for, being unable to resist the temptation to indulge in wars which they cannot really afford, they are continually throwing their liability in the form of national debts on to future generations; and society only keeps up and adds to its supply of capital because the individual members of it, on the whole, spend less than they get.

Saving and Security of Property. — What are the conditions under which we may expect individuals to save, so that capital accumulates? The first and essential condition is security of property. It is not intended by this to suggest that the *existing* rights of property must necessarily be maintained. The " rights of property " may vary from country to country and from time to time, but at any given time and country there must be security, or capital will not accumulate; just as the worker will be an indifferent producer if employment is irregular and wages are uncertain. If the government cannot maintain law and order, or if its officers use their position to abuse instead of protecting its citizens, if the unfortunate producer is never certain how much of his product he will be able or permitted to retain, then the producer will produce little, and will take steps to secure for his own use all that he does produce, by consuming it all immediately.

Saving and Remunerative Investment. — The second condition is that the person who saves should have opportunities of using his savings remuneratively; this was shown by the new openings for investment provided by the mechanical inventions of the Industrial Revolution, and by the institution of banks and corporations, which all stimulated the accumulation of capital. There are cases, of course, where foresight and imagination are so highly developed that the owner of wealth is indifferent whether he gets the use of it now or in the future; in such cases saving is easy, and will go on almost irrespective of the rate of interest. But most people find it difficult to save; the enjoyments that can be secured by spending attract, and they forget the future. Communities and classes differ in this respect as well as individuals. It takes time for a habit of saving in a community to be developed. The traditional savage — happy man — does not worry about the future, and will not usually forego a present satisfaction though he might gain thereby a much greater satisfaction in the future; the French peasant, on the other hand, sometimes thinks so much of providing for his old age that he starves himself in youth and middle age.

Saving and Inequality in Distribution. — In the twentieth century a new consideration has to be added; wealth in the richest countries is so unevenly distributed, so much of it is concentrated in the hands of a few, that sometimes these few find it easier to save part of their income than to spend it all. The greatest fortunes are often made by men of uneducated tastes, who accumulate wealth, not for the sake of the wealth, but because their abilities lie in the direction of accumulating wealth; they are ambitious only to be successful, and among their associates success is measured solely by the accumulation of wealth. They do not know how to use the wealth they have accumulated; they never realize that it needs as much ability, though of a different kind, to spend money well as to make it; and having provided for themselves necessities and luxuries in excess of the most vulgar standards of ostentation, perhaps endowed a religious denomination or founded a university, they still have some of their income left and can only add it to their already burdensome capital. Saving with them is not "abstinence," but self-indulgence. Such persons are fortunately few, but as society gets richer, saving becomes possible for a larger number of people, and saving in larger amounts; the accumulation of capital, unless interrupted by war, revolution, or misgovernment, proceeds like a snowball.

III

Different Types of Organization for Applying Capital

The Individual Business. — A society's capital, however accumulated, cannot be used to the best advantage unless there are some means of getting it into the hands of the people who have organizing ability. How far do such means exist to-day? So long as industry was simple, so long as the tools of manufacture cost no more than their user could earn in a few weeks, no special social machinery was needed for this purpose. The man who had the ability to run a business could usually be relied on to save for himself all the capital he needed. This oldest of all methods of finding capital is still the most important. More businesses to-day are established by men who have saved enough to set up for themselves than by any other means. Most of these businesses are small, but some of them serve as stepping-stones to something bigger. As we have seen, there are still many fields in which large-scale enterprise has no overwhelming advantage over small. In retail trade, merchanting, and in some branches of the building trade, for example, it is possible for a man who possesses enterprise and saving habits — rather a rare combination — to set up without aid from other people's capital. Even in manufacturing, wherever it is possible to rent room and power, the majority of firms are often firms of this simple type. A man with organizing ability and enterprise, having set up for himself, can attract attention and find "backers." If the "backer" decides to come into the firm as a partner, he may bring experience and ability into it as well as capital; more usually the man of ability but no capital gets his opportunity by being taken into partnership by his employer. Thus the partnership form removes many of the weaknesses of the private firm. It introduces new blood and provides more capital; and it divides the work of management, which might in time be too much for a single man, without dividing responsibility.

The great strength of the private firm is this union of interest and responsibility. The persons who have everything to gain or lose by the management of the business have that management entirely in their own hands. Their self-interest is an automatic check on waste and inefficiency. Moreover, centralized control saves a great deal of routine and red tape, and makes the business more mobile, quicker to act than any business managed by a committee. Hence it is the more suitable form of business for any enterprise in which risk-taking is an important element. The head of a private firm is likely to be more enterprising than the manager of a joint-stock company, because in case of failure he is answerable only to himself, and in case of success he takes the whole profit; Julius Cæsar was always willing to risk everything on a pitched battle, because he was fighting for his own hand, while Pompey, with the Senatorial party dependent on him and "advising" him, dare take no risks; the head of a business in a speculative trade requires very much the same qualities as a general.

The Corporation. — Yet industry and commerce could never have reached their present scale if individual action had been the only means of assembling and mobilizing capital. Some businesses, such as railways and the supply of water, involve so large a capital outlay, and require the investor to wait so long for his return, that they would hardly attract individuals acting alone, even if individuals could find the necessary capital. Such undertakings can best be made by a number of people contributing each a part of the whole capital, in other words by a corporation. In other businesses, such as banking and insurance, publicity, reputation,

and size are great aids to success, and a great corporation possesses these; longevity is another great aid, and a company can outlive any individual, it need not be dependent on any one person and need not end with any one person's death. Having arisen to meet the case of enterprises for which it has peculiar advantages, the device of corporate enterprise has been applied continually to new fields of business, and new advantages have been discovered in it. This progress has been especially rapid since the principle of limited liability was made the basis of corporation. So long as the shareholders in a corporation were regarded by the law as partners merely, jointly *and severally* liable to the full extent of their whole resources to meet the debts of the company, this form of business could advance but little. The device of limiting liability removed the obstacle; by complying with certain rules any group of persons of the required number can organize a limited liability corporation, in which the liability of each shareholder to meet the debts of the company is limited to the amount of his share; if he holds only one $100 share and the company is unable to meet its creditors' claims on it, he is liable to lose his $100, but the creditors can claim nothing more from him.

Corporate Securities. — The nature of a limited liability corporation or joint-stock company is exactly described by its name. The basis is a "joint stock," the capital of the company being supplied by a number of people who hold "shares." Usually there are two or three classes of shares or stock. The Common Stock carries with it the control of the business, its holders take the profits and bear the losses; the Bonds represent loans of capital made to the company, on the security of the company's property (which can be seized if interest is not paid), receiving a fixed rate of interest which must be paid before any profits are declared, and carrying with them no share in the government of the company; bondholders are creditors of the company, ordinary stockholders proprietors. Preferred Stock is an intermediate class, on which is paid not a rate of interest fluctuating with the earnings of the company, but a fixed rate. If the company does well, preferred stock receives no more than the fixed rate; if it does badly, the claim of the preferred stock ranks after the claim of bonds, and must be satisfied before any interest may be paid on the common stock. In case of liquidation, too, Preferred Stock usually gives a prior claim on the assets of the firm. Preferred Stock is either "cumulative," in which case any deficit in one year's interest on it must be paid out of succeeding year's revenue before dividends are paid on common stock; or "non-cumulative," in which case the preferred stockholder's preferential claim applies to each year separately and is not carried forward from one year to another.

Advantages of Corporate Form. — The company form makes possible the raising of capital for the very biggest enterprise. It enables the holder of small savings, who does not wish to use them in business himself, and who is not in close enough touch with business to intrust them to any private firm, to invest his savings remuneratively. It is equally useful to the holder of big savings, since it enables him to distribute his capital among many enterprises (and countries), and so avoid the risk of carrying all his eggs in one basket. Since shares in corporations are usually salable, the investor can realize his property in a business without breaking the firm up; if he were a partner in a private firm and wished to withdraw his capital, either he must find some other capitalist to take his place in the business by buying his share, or he must risk breaking up the firm, since it might be unable to continue without his capital. The corporations provide another opening for men with organizing ability but no capital. As the amount of capital required to start in business increases, this alternative opening becomes more and more important; by no means, however, does it provide the career open to talent, which the

efficient organization of industry, no less than justice, requires. "Influence" and nepotism are by no means confined to private firms; it is a great advantage to any one employed in the higher branches of the railway service to be the son of a railway director. It is hard, however, to see how mere organization can overcome this evil; in the most democratic of countries we find that lucrative and influential posts in the government service are filled almost exclusively from the so-called upper and middle classes; democracy is a spirit, not a piece of governmental or economic machinery.

Disadvantages of Corporate Form. — The corporation has its weaknesses as well as its advantages. It facilitates "absentee" capitalism, a much greater evil than absentee landlordism. The shareholders of a company may profit by iniquitous conditions of labor or the exploitation of defenseless natives without even suspecting their own responsibility; their ignorance does not excuse them, but a system that permits ignorance is a direct discouragement to honorable dealing between operative and employer. From the point of view of productive efficiency also the corporate system is defective. The management of a business by its owner provides an automatic check on inefficiency and waste inside the business, since the owner-manager bears all loss; the corporate system removes this automatic check. The ownership and control of capital are separated; the owner takes the profits and the controller only his salary. Attempts are being made to overcome this defect by giving managers a bonus on profits; but it is difficult to restore that incentive to enterprise, that willingness to act in spite of the risk of failure when the chances of success are great, which the ownership of his business gives a man. The manager of a corporation may be quite satisfied within himself that a certain course of action would pay, and yet be unable to explain or justify his belief before a committee of directors. It may be a case of "scrapping" good machinery on a big scale, or instituting a new and expensive process, or paying an unusually large salary to secure an unusually able subordinate, or changing the direction of the company's aims to a new class of goods, requiring expensive additions to and adaptations of machinery, or to a new market, requiring a big expenditure on advertising and agents; to the manager, with his vivid perception of the future advantages of the action, the present cost may seem almost negligible, to the directors and shareholders the present cost — and present loss of dividends — may seem so great that they prefer to get a new manager. Against this we must set the dependence of the private firm on one or two individuals; how often can one see a great firm, built up by the ability of a father, go down under the incompetent management of his sons or grandsons. A private firm, like an autocracy, is an efficient form of organization so long as its head is capable; the corporation, the coöperative society, and the municipal undertaking probably get in the long run as good or a better average of ability.

Special Applications of Corporate Form. — It should be remembered that the convenience of limited liability is so great that many businesses which are really private firms, controlled and owned by one man or a single family, have adopted the legal form of a limited liability company. Another use of the joint-stock company is to enable an individual or family to increase its capital without relinquishing its autocratic control of the business. There are many large businesses, the shares of which are very largely in the hands of one man or one family; all that that man or family has done has been to admit the public into the business in the capacity of sleeping partner in order to get additional capital. This can be done most easily if the family or individual on floating the business keep in their hands all the common stock, letting the public take bonds. Or, again, a public company may get into the hands of a narrow circle of capitalists who have purchased a majority of the shares.

Other Forms of Organization. — The other important organizations of capital or types of business we can deal with more briefly because they are described elsewhere in this book. In the coöperative undertaking capital is supplied by the consumers who receive the profits, not in proportion to their holding of shares, like the shareholders of an ordinary company, but in proportion to their purchases. The great advantage of the system is the stability given to the trade of the firm by the dividend on purchases. State and municipal enterprise are similar. A municipal street railway undertaking is a corporate enterprise in which the risks are borne, the management appointed, and the profits taken, by the taxpayers instead of by ordinary shareholders, while the capital embodied in the plant is supplied by private investors, who receive a fixed rate of interest secured by the revenues of the municipality, and are therefore very much in the same position as the bondholders of an ordinary corporation. The details of organization and management in a municipal undertaking and in a corporation are much the same; the check on inefficiency is different; in the one case society relies on the shareholders and directors to use their power to alter the management as soon as inefficient management diminishes their profits, in the other case the taxpayers have the management in their own hands and are relied on to check inefficiency in their own interests as both users and owners. The great difference between them, however, is a social or political, not an economic one; the former is immediately under popular control through the machinery of representative government, the latter is not.

Limits of Corporate Enterprise. — Adam Smith has a suggestive section on the limits of corporate enterprise (Bk. v. ch. i.).

> The only trades which it seems possible for a joint-stock company to carry on successfully, without an exclusive privilege, are those of which all the operations are capable of being reduced to what is called a routine, or to such uniformity of method as admits of little or no variation. Of

this kind is, first, the banking trade; secondly, the trade of insurance from fire, and from sea risk and capture in time of war; thirdly, the trade of making and maintaining a navigable cut or canal; and, fourthly, the similar trade of bringing water for the supply of a great city.

The subsequent development of corporate enterprise does not prove his principle to be unsound; it does show that he unduly limited the number of cases it would cover. The great successes of corporate enterprise have been in the field of large-scale enterprise. Now large-scale enterprise can be conducted successfully in the long run only if it reduces much of its practice to routine. Therefore to Adam Smith's instances we must add not only newer means of transport and newer developments of insurance and banking, but a great deal of manufacturing. Where, as we have suggested, a private business has a great advantage over both the corporation and municipal enterprise is in taking the risks of a quickly moving market. Railways, insurance companies, street railways, water, gas, and electricity supplies, are not only capable of being reduced to routine; they are capable of being reduced to routine just because they require no special marketing skill, because they are little troubled by foreign competition, fluctuating supplies of raw materials, the incursion of new firms into the market, and the fluctuations in demand due to changes in fashion and similar incalculable causes. Where, again, as it is so largely in the cotton industry, risk-taking is separated from the organization of manufacture, the latter becomes a suitable field for corporate enterprise. It should be added that a great deal of routine work, small shopkeeping and farming, will never be taken over by corporate enterprise because the business is not worth the trouble and expense of forming and registering a company.

IV

The Market for Capital

Structure of Capital Market. — Is there a market for capital? A business requires capital to start it; and it requires frequent loans of capital to help it carry through its commercial transactions, and enable it to expand. For the latter purpose there is a highly organized market, the so-called "Money Market"; consideration of this must be postponed until we examine our monetary and credit system at length; for the former and more important purpose there is no definite market, but the beginnings of an organized market are to be seen in the methods of raising capital to start a new business. The commonest way of collecting the capital needed for a corporate enterprise is by advertisement, and by the circulation of a statement of the objects and needs of the company, called a prospectus. There is also a highly specialized class of "dealers" in capital, usually called "financiers," who have capital of their own and also control a great deal of other people's capital, and can therefore insure the subscription of sufficient capital to start a promising enterprise, can in a word "float" a business. Similarly, promoters, stockbrokers, and others help to direct the flow of capital into the channel where it will give the best return. Investment and trust companies afford perhaps the nearest approach to an organized market for capital; they undertake to invest their capital for people who feel they have not sufficient knowledge to do it for themselves. Insurance companies accumulate enormous funds which are available for safe investments. And wherever an industry is strongly localized, its prospects and possibilities, and the prospects and possibilities of firms and individuals in it, are probably sufficiently well known to make unnecessary any more special devices for bringing together the man with capital to invest and the man who can use capital.

Stock Exchanges. — The Stock Exchange is sometimes spoken of as a "market for capital." That it is not; the capital of a company has already been found and applied to the company's objects before its stock or shares appear in the Stock Exchange lists. The Stock Exchange is a market for the shares of companies that exist; it facilitates the transference, not of capital from one industry to another, but of shares of existing businesses from one owner to another. Indirectly, however, it is the means of guiding new capital into the industries in which it is most needed. By making shares readily salable, it encourages investment; and by registering the changes in value of shares in existing companies, it indicates where new capital is needed; if railway stock rises in value on the Stock Exchange, people with disposable capital are inclined to put it into new railways; if automobile stocks have fallen more than stocks in other industries, investors are warned not to put any more capital into the automobile industry.

CHAPTER VI

COMPETITION AND ASSOCIATION

I

The Pervasive Influence of Competition

The Rôle of Choice. — Let us take our stand at the outfitter's counter once more. We hesitate whether to buy a woolen or a cotton shirt; we might buy either, we shall not buy both. That means that the woolen industry *competes* with the cotton industry for our custom. We decided to buy a woolen shirt, and gave $2.50 for it. We could have got a cheap cotton shirt for seventy-five cents, and with the other $1.75 bought a book to present to friends. That means that the book trade competes with the woolen trade for our custom. Or we might have spent the $1.75 on a seat at a theater; the theatrical trade then also competes with the woolen trade. The incomes even of the richest are limited; we have to *choose* between the different things that are offered to us for purchase; therefore the trades supplying these things are competing for our custom.

Complicated Nature of Competition. — However, we spent our $2.50 on a woolen shirt. The outfitter at whose counter we stand is not the only man in the town who sells woolen shirts; we might have gone to other shops; there is *competition* then among haberdashers for that portion of our income which we spend upon woolen shirts. The retailer who supplied us got the shirt from a jobber; he might have got it from some other jobber; that is to say, jobbers ***compete*** for the custom of our retailer. The jobber bought his shirts from a shirt-maker; there are many firms of shirt-makers, and they all *compete* for the jobber's custom. The shirt-maker bought the flannel, of which the shirt is made, from a manufacturer; he probably does not buy all the flannel he uses from the same manufacturer, and flannel manufacturers compete for his custom. Similarly many spinners competed for the manufacturer's custom, many wool dealers or growers for the spinner's custom. At every stage in the progress of the wool from raw wool to finished shirt there was competition for custom. Possibly two or three stages in the process of manufacture were under the same management; perhaps the manufacturer spun his own yarn, or the shirt-maker retailed his shirts to the public direct. But such "integration" only shuts out competition at one or two stages, it does not shut it out all along the line. A firm that controlled every process from the growing of the wool to the retailing of the shirt would still have to compete with other retailers. A trust that had control of the entire supply of some one article would have to meet the competition of substitutes and other commodities. In the unlikely case of a trust getting control of the entire supply of woolen shirts and putting up their price, we should buy cotton shirts; in the impossible case of a trust getting control of the supply of shirts of all kinds, we could still wear knitted underwear.

Scope of Competition. — We saw, however, that the woolen industry does not work in isolation. All the firms through whose hands the future shirt has passed on its way to the outfitter's counter employ some transport agencies. Usually they have a choice of transport agencies; that is to say, the various transport agencies compete for their custom. Possibly two or three railways competed for the privilege of carrying the wool from the port to the spinner; or if there was no competition among railways, the railways had to face

the possible competition of canal and motor-truck. Most of the firms used some machinery; many machine-makers competed for their custom. They all used some sort of premises; many builders had competed for their custom when the premises were built. We need go no further back; only remembering that steel of which instruments are made, and coal from which power is obtained, are needed all along the line, and are to be obtained from more than one source.

One further step and this piece of our analysis is finished. At every stage in the making and moving of the shirt, the three agents of production—land, labor, and capital—were used. Hence at every stage there were landowners, capitalists, and workers competing for employment. Each class competed with the other classes; the manufacturer, for instance, might hesitate between capital in the form of labor-saving machinery and labor, between capital in the form of more perfect machinery and the products of land in the form of better raw material. And the members of each class compete with one another; landowners offer competing sites, laborers offer their labor, and capitalists their capital against one another.

Thus at every stage in the making of the shirt and all along the line there is *competition for custom*, competing offers to supply. The buyer has a choice. The inducements which the sellers offer to the buyers to give them custom vary. The most obvious is to offer the same article at a lower price than competitors; but that is not the only inducement. The seller may offer a better article at the same price; or he may offer the same article in a more attractive wrapper; or he may advertise his article and so create in the buyer's mind, without the buyer being conscious of it, an opinion that his article is a superior article; or he may employ a persuasive agent, or a traveler who is a Free Mason or member of the "B. P. O. E." and therefore acceptable to buyers who are also Masons or "Elks"; or he may offer some brand or patent or specialty which certain users insist on having. There are many ways in which sellers seek to induce buyers to prefer their goods to those of other sellers. They may even make no attempt at all, and leave the buyers to decide without any inducement; but so long as the buyers have a choice, what the economist means by " competition " exists; the buyer is not restricted to one source of supply.

Competition in Buying. — Competition works also the other way. Just as there is competition to sell, so there is usually competition to buy; competition to buy is just as general as competition to sell. We are not the only people who want shirts, and, if we will not pay the outfitter's price, he will keep his shirt for some other customer. Our outfitter is not the only man who wants shirts to stock his shop, and he has to compete with other retailers for the stocks of the wholesalers. Similarly the jobbers are dependent on the shirt-makers, who can play off one jobber against another. The shirt-makers compete with one another for the manufacturer's stock of flannel. The manufacturer competes with other manufacturers for yarn; the spinners compete among themselves for wool. All the firms engaged in manufacture compete with one another for the necessary machines, and the machine-makers with one another for supplies of steel. All of them are competing for the use of transport agencies and for coal. And every firm wants labor, wants capital, and wants land; and since the supplies of labor, capital, and land are limited, there is competition to buy them.

Thus, to generalize from our humble example, a society which employs the division of labor is a competitive society, using " competition " in the broadest possible sense without any suggestion of good or evil. Throughout industry we see on the one hand competition among sellers for custom, and on the other hand competition among buyers for goods and services.

Competition and Price. — The competition of buyers tends to keep prices up, the competition of sellers to send them down. Normally the pressure of competition among sellers is stronger than that among buyers. The seller has his article to sell, and must get rid of it; the buyer is not yet committed to anything — he may decide to buy a substitute or devote his money to some other object altogether. But all alike are subject to some pressure of competition — none can afford to forget that he is not alone. The seller must remember that if he will not sell, his customer can go elsewhere; the buyer, that if he will not pay the price, there are others who may. Even where a single process, or the supply of some material, or even an entire trade, may be monopolized, the monopolist would not have freed himself from all pressure of competition. He would still have to compete with other trades for labor and materials, with other goods for the custom of the public. Even the different departments of the same public authority compete, for example the gas and electric light authorities of the same municipality under municipal ownership of these utilities. Competition in the present economic system is like a head of water; we can build our weirs and embankments and they will give us a respite from its pressure, but its force has not been abolished.

II

Conflicting and Common Interests Arising from Competition

Competition and Association. — What effect has this pressure of competition on the relations of the firms and individuals that make up the business community? We can usually trace the effect of any continuous pressure in the structure of a body; we can do so in this case in the structure of economic society. Competition gives rise to a series of conflicting interests and a series of common interests among individual firms. The conflicting interests lead them to stand alone, the common interests lead them to associate. Thus, according as we look at it from the point of view of the conflicting or the common interests, we shall see society as an assembly of competing or an assembly of associated units.

The Conflicting Interests. — The different trades compete forward for society's income, backward for the agents of production and the services of the transport, power, and implement industries. What one has, another cannot have. Districts and countries compete for custom — for the market, as we say — and for raw materials and other requisites of production. In each trade, at each stage, the different firms compete, each anxious to get as big a share of the whole trade as possible, each anxious to get its materials and the means of production specialized to its business as cheaply as possible. The individuals of society compete with one another in two capacities; they compete as consumers and they compete as producers. As consumers they could all probably do with more than they get; they would all certainly prefer to pay for their goods the lower price at which they could get them if they were the only customers for them. Similarly they compete as producers; each has some labor to sell, or else the use of some land or capital. The price each can gets depends on the price that other people will accept for their labor, land, and capital. Thus everywhere we find the conflicting interests which we commonly associate with the word "competition," and, because this conflict of interests is so obvious, we are inclined to forget or ignore the correlative community of interests which this conflict creates.

Community of Interests. — How does competition create a community of interests? It does so by its influence on prices. Competition to sell tends to force prices down, competition to buy tends to force prices up. The mere existence of an alternative seller is a check on the power of any seller to exact the price he would like; the mere existence of an alternative buyer is a check on the power of any buyer to buy as cheap as he would like. The worker's income depends on selling labor at a high price and buying commodities and services at a low price; it is the competition of other workers that keeps down the price he can get for his labor, the competition of other consumers that keeps up the price of commodities and services. Similarly with landowner and capitalist; it is the competition of other landowners and capitalists that hampers their efforts to get a higher price for the use of their land or capital. So with industries; the competition of other industries is the check on the prices they can charge; at the same time it is the check on their power to beat down the other trades, the workers, the capitalists, the landowners, from whom they buy materials and aids to production, labor, capital, and land. Inside any one industry, it is the competition of other firms which hampers each firm in its efforts to sell its products dear and to buy its labor and its materials cheap. The members of each economic group or class, therefore, while their interests conflict within the group or class, have a common interest in relation to other groups or classes. They have a common interest in keeping up the selling price of the commodity or service which the group has to sell, and in keeping down the buying price of the commodities and services which the group buys. All incomes depend on success in selling dear and buying cheap; competition, the existence of an alternative seller or buyer, is the obstacle to success. The members of each economic group or class therefore have a common interest in extinguishing or restricting competition *within the group or class.*

Conflict and Community of Interest. — Thus we get the common interest of all the traders in one district as against traders of another district; Free Traders and Protectionists agree as to the desirability of getting as much trade for their own country as possible, they differ only as to the means; and as all the citizens of a country have a common interest in that country's prosperity, so have all the members of a town or industrial district in the prosperity of that town or district. So too we get "the interest of the trade." All the persons connected with the cotton industry have a common interest in inducing the public to prefer cotton to woolen shirts; within the boundaries of the trade they may quarrel among themselves as to the disposal of the price of the shirts, but they are united in their hostility to wool and linen; they all, from the humblest operative to the biggest manufacturer, stand to gain by a growth in the demand for cotton goods. Within each trade again, while there is conflict between the different firms at each stage, the stages have each a common interest which will sometimes serve as a basis for common action. Manufacturers all agree that retailers get more than their fair share of the profits of an industry, and they will act together to prevent their exactions; the retailers, on the other hand, will form retailers' defense leagues to protect themselves against the exactions of manufacturers. All the firms at each stage of a manufacturing process have a common interest in getting as cheap as possible what they take from the preceding stage and in selling their work as dear as possible to the succeeding stage. To come to individual firms, while employer and employed do not always constitute a happy family, they have some interests in common. The employer wants as big a share of the trade as possible, and his employees stand to gain if he succeeds. They may get no bigger wages than they would get if the firm were unsuccessful, but they gain something in regularity and security of employment. And when we come back to the final agents of production — land, labor, and capital — while landowners compete with one another, laborers with one another, and capitalists with

one another, no one who is interested in politics is likely to forget that there is a "landed interest," a "capitalist interest," and a "labor interest."

Thus everybody in our present economic society stands in two relations to the other members of society, in a relation of conflicting and in a relation of common interest. Both these relations spring from the same cause — the prevalence of what, for want of a better word, we call "competition." Competition tends to force us to struggle, fight, conflict with our neighbors; the desire to relieve ourselves from the pressure of competition compels us to combine, associate, coöperate with our neighbors. We associate with our competitors in one economic group, in order to compete more effectively with other groups.

III

Combination and Trade-Unionism; the Coöperative Movement and Municipal and National Trading

Purposes of Combination. — A common interest leads people to associate; what are the chief forms of association in the present economic system? We have seen that competition takes two forms, competition to sell and competition to buy. We can best consider the chief forms of association under these two heads, associations to escape the pressure of competition in selling and associations to escape the pressure of competition in buying.

Restricting Competition in Selling. — Associations to restrict competition in selling have attracted most attention, and we shall return to them in the next two chapters. The most important of them are the combinations among firms in the same trade in trusts, cartels, pools, and price-agreements, and the combination of workers with the same kind of skill in trade unions. Sellers always have acted together in fixing prices; never have they competed quite freely. Such phrases as "the custom of the trade," a "fair price," "cut-throat competition," "bad for the trade," indicate that sellers in every trade agree informally and perhaps unconsciously that there are limits to their freedom of action, that "the trade" has a claim on their loyalty and consideration, because "the trade" represents an interest which they have in common with their competitors. Before the Industrial Revolution this common interest was often expressed in corporate form, in gilds and companies, or formulated by authority in statutory prices and qualities. In the last generation it has again become explicit; all sorts of combinations, from temporary price-agreements to complete amalgamations, have been formed. Where the law will enforce such a contract, contracts have been entered into by former competitors to observe common price lists and selling rules, as has been done in Germany; where the law would not enforce such a contract, as in England and the United States, secret agreements or out-and-out amalgamations have been substituted. Any combination gives a respite from the pressure of competition, no combination abolishes competition. The most successful monopolist has to compete with substitutes, with other trades for society's income, and with other trades for materials and land, labor, and capital. A very small restriction on competition, however, may be sufficient to make a very large fortune.

Trade Unions. — Trade unions are associations of sellers who have a particular kind of labor to sell. Since they have usually nothing else to depend on, these associations are peculiarly important to their members, and in England are given a privileged legal position. They are the most obvious case of the stress of competition forcing people into coöperation or combination. Just as capitalists with a specialized kind of capital try to combine and get a monopoly of that kind of capital, so laborers with a specialized skill try to combine and get a monopoly of that kind of skill. In neither case, however, as we shall see later, does the monopoly constitute the only, or even the chief, advantage of combination. The "interest of the trade" and the "interest of labor" are not confined to the attempt to secure a monopoly price.

Restricting Competition in Buying. — Important as are associations to restrict competition in selling, they are probably less important, less successful, and less general than the associations which have for their object the restriction of competition in *buying*, or which are based on the common interest of the members of a group as buyers. Consumers, as a class, have a common interest, which is responsible for many forms of association; and the "competing" members of every trade have a common interest as buyers, which produces much more stable associations than their combinations to sell. The one form of consumers' association which has not attracted in the United States the attention it deserves is the coöperative movement, an association of consumers for the coöperative purchase of common articles. The coöperative stores of Great Britain have a membership of about three million and an annual trade of almost $800,000,000. The loyalty and continued custom of this great mass of consumers is secured by distributing among them the profits — or rather the difference between cost price and selling price — in the form of dividend in proportion to purchases. Idealists often lament the importance which coöperators attach to the "divi" — rightly, if the "divi" leads coöperators to forget their ideals; but we must remember that the device of dividend on purchases is one of the great social inventions of the nineteenth century, great because it enlists for an idealist movement the loyal support of people who are susceptible only to a materialist appeal.

Types of Coöperation. — In England, where the coöperative movement has developed farthest, the coöperative store is the best known of the associations of consumers, but not the biggest. The friendly societies have a far bigger membership, and are merely associations of consumers to buy medical service and insurance against sickness. The clubs, of which English society in every grade is prolific, are the same in principle; when Englishmen wish to play golf or cricket or football, they associate to rent and adapt fields and purchase implements; they get billiards and cards in the same way, and the Christmas goose club is only another application of the same method. The English working-classes are coöperative to the backbone, if by coöperation is meant the association of consumers; whatever they care most about, they prefer to get by associating with others to buy it collectively. In the United States clubs of various kinds, lodges, etc., are also common, but the coöperative spirit of the mass of people is much less highly developed than is that of the English public.

Agricultural Coöperation. — The term "coöperation" is used to describe another form of buyer's association, which is less common in England and America than on the Continent. The independent and competing peasant farmers of Denmark require certain expensive machinery to turn their milk into butter. If they acted independently, since they could not afford to buy machinery, they would have to sell their milk to a large firm that could, or pay some such firm a commission for the use of machinery, as English farmers pay for the hire of steam-plows. They prefer to act coöperatively. The "competitors" combine to purchase and manage the dairy plant, all send their milk to it, and each is credited with a proportion of the output corresponding to the milk he sends; any profit (or loss) is distributed among the members in proportion to the use they make of the plant. The principle is exactly the same as that of the coöperative store, except that the members are not heads of families buying for their own consumption, but heads of businesses buying for the purposes of their businesses. Having set up their coöperative society, they can use it for other purposes, and the coöperative dairy is used to secure marketing facilities and for the purchase of manures, stock, and implements. By coöperating in this way the Danish peasants have been able to compete more effectively with the farmers of other countries. The English farmer, with an industrial population at his doors, has been able to turn from grains to meat and from meat to milk as foreign competition pressed on him, and is only now finding it necessary to coöperate in order to compete effectively. Among German small farmers, the place of the coöperative dairy is taken by the coöperative bank. None of them has enough capital to work his farm to the best advantage. Acting independently, they would have to go to the money lender and pay dear for their loans. So they combine and form a stock of capital by contributing each a little, and loan this out among the members. They are competitors in the sale of the product, they associate to get the means to raise that product.

Employers' Associations. — Less obvious applications of the same principle — the association of competing businesses to obtain some requisite of the business otherwise unobtainable, or to restrict competition in buying some requisite — are to be found in great industry conducted on capitalistic principles. Just as the trade union is an association of workpeople to restrict competition in the *sale* of labor, so employers' associations and federations are primarily associations to restrict competition in the *buying* of labor. While employers are competitors in the sale of the product, they associate to get the means to raise that product. Their associations may serve other purposes, such as watching the interests of the trade before state and national legislatures — an extremely important work in a protectionist country, where a new tariff may make or mar an industry — and advertising its products. Competing banks associate to maintain the clearing house, without which they could hardly carry on their work; fire insurance companies pool their statistics, and reinsure with one another to prevent and distribute losses. Competing newspapers combine to set up press associations for the collecting of news, and, it is said, in one instance to finance the defense in a "spicy" murder case. The specialized market or exchange and the representation to the public of a localized trade's needs and claims through the chamber of commerce are secured in the same way by coöperative action.

The parallelism of the commercial method of supplying a want, by independent purchase, and the coöperative method, by association of consumers, may be illustrated by a case, common both in England and the United States, which embodies both methods — or neither. It is common for a club in England and the United States to be organized as a corporation with transferable shares which may earn a profit. If this is done merely for convenience of administration, and the dividend on the shares is limited to 4 per cent or 5 per cent, we could regard the club as a coöperative institution; if, on the other hand, it is run primarily for profit, as many clubs are, we should regard it as a purely commercial undertaking in spite of its coöperative appearance.

Public ownership. — There remains for consideration an important type of association of consumers for coöperative purchase, namely the use of the machinery of representative government for some general economic object. Municipal and national ownership or "trading," as it is called in England, looked at from the point of view of economic structure, are another case of the association of consumers, and present a very close parallel to the two sections of the coöperative movement proper which have been described. Certain commodities of very general consumption — gas, water, electricity, street railway service — may be owned and controlled by the municipality. Since the municipality is simply the consumers in their political capacity we may say that

municipal ownership is coöperative ownership. So far as the consumers and the taxpayers do not coincide, so that profits made out of the consumers and distributed in relief of taxes are not being paid back to the consumers, the coöperative principle is being infringed. It should be noticed that these services are almost all from their technical nature monopolies.

Public Aid and Advertising. — The other class of municipal ownership corresponds to the other type of voluntary coöperative organization, of which the coöperative dairy or credit bank are typical. It is the use of the machinery of representative government to aid the citizens in their capacity as business men, not as private consumers. Bradford, the center of the English woolen and worsted industry, maintains a conditioning house for testing wool; in Roubaix, the French woolen center, the chief conditioning house is maintained by the Chamber of Commerce. The Bradford Corporation went for its water many miles farther than it otherwise need have done, because it must have soft water for wool scouring and dyeing; and it has decided to subsidize the Midland Railway Company, to induce it to bring its main line through the town, on the ground that a main through line will benefit the trade of the city. The city of Cincinnati built a railroad into the South to develop its Southern trade. Similarly watering-places maintain municipal baths, seaside board walks, municipal concert halls and bands, and spend large sums on municipal advertising in order to aid the taxpayers in the chief business of the town, boarding-house and hotel keeping. So far from superseding private enterprise, these municipal undertakings are carried on to aid private enterprise.

Association, then, or coöperation, is as common in the present organization of industry as is competition. The description of the present organization as "the present competitive system" is justified by the reliance which the community places on competition to insure an equitable distribution of wealth, and we shall consider competition from this point of view in a later chapter. But the common sharp opposition of competition and coöperation is misleading, since competition is constantly inducing members of the same economic group or class to associate or coöperate, and much coöperative organization is for the object of enabling the members to compete more effectively. Competition and coöperation represent opposite motives; but the opposite of "competitive" in the phrase "competitive system" is "bureaucratic."

CHAPTER VII

MONOPOLY AND COMBINATION

I

In Certain Industries Economy and Efficiency Can Be Secured Only by Monopolistic Control

In the last chapter we saw that different classes of buyers, impelled by a common interest, formed different kinds of coöperative associations for buying. Similarly, we saw, the sellers of a commodity have a common interest in keeping the price of that commodity high, and this common interest leads them to associate or combine. Hence we get in modern industry cases of monopoly and a strong tendency in the direction of monopoly.

Definition of Monopoly.—An industry is said to be monopolized when the supply of its products or services is under the control of a single selling agency. This agency may be a single firm, which has in its own hands the entire industry; but there may be many firms in the industry and yet monopoly may exist, provided that the firms all act together as one agent for purposes of selling. Monopolies fall into two classes: in the one class the monopoly is the outcome of technical considerations which make it impossible without great waste for more than one firm in each market to engage in the industry; in the other class technical considerations impose no such restriction on the number of firms that can engage in the industry, and the monopoly is due to combination between firms which previously competed. In the first class monopoly is usually complete and permanent; in the second it is seldom complete and seldom permanent; but even when the attempt to secure monopoly fails, it leads to important modifications in the structure of industry.

Public Utility Monopolies. — The chief industries that fall within the first class are the supply of water, gas, and electricity; street railways; and postal, telegraph, and telephone services. If railways may be taken as belonging to this type, then perhaps a quarter of the capital of the United States is invested in these industries. The chief characteristic of them all is that they are tied down by the nature of their equipment and organization to serving the particular market in which they are situated. This is so, because the products of the gas, water, and electric light industries, and the services of the other industries mentioned, are distributed and delivered to the consumer not by the ordinary means of transport, but by specialized means forming an important part of the "plant" or fixed capital of the industry. A gas or water company can supply only the district served by its pipe lines, a street railway company only the districts reached by its lines, a telephone company only the persons connected by wire with its exchanges. But if these companies have their market restricted, they have it to themselves. Water, gas, and electricity can be supplied cheaply only to consumers connected with the supply pipe or cable; and, since it is obviously impossible to have two sets of gas mains, water mains, and cables down every street, the firm with which a consumer is connected has a monopoly of that consumer's custom.

The case of the industries which maintain communications is similar; though their monopoly is not quite so secure, their market is still "protected" by influences more potent than any tariff. Telegraph and telephone systems, postal service organizations, even street railway systems, can be duplicated at less expense than systems of water mains and gas mains; but duplication impairs the efficiency of the service. To duplicate water mains would not impair the quality of the water, but a telephone system is efficient only when it has a monopoly. Any system of communication to do its work properly must include all the people who wish to communicate; if the telephone subscribers in a district are divided between two competing telephone companies, then the subscribers of neither will have access to all the people on the telephone in the district. Competition between different telephone companies, different telegraph companies, or different postal services serving the same area is possible only by completely duplicating plant and organization, and, since the number of possible customers — the "market" for the service — cannot increase correspondingly, such duplication can never pay, and is not likely to be lasting. If it were not already appropriated to another purpose, the term "localized industries" would describe this first class of monopolies. They can serve only the locality in which they are situated, and they are open to no competition from outside the locality; within the locality competition is excluded, in the case of gas, water, and electric light and street railways, by the method of distributing the goods or services supplied, in the case of the communication industries by the nature of the service rendered.

Economy of Monopoly. — It will be noticed that all these industries, except the Post Office, require an initial expenditure of capital which is very large in proportion to annual working expenses. The plant in every case is expensive, but economical; it costs a great deal to construct, but cheapens the service to such an extent that competition is possible only from firms with a similar plant; the cost of supplying water, for example, is almost negligible, once reservoirs are constructed and pipe lines laid. Hence a large proportion of the income from fees and charges goes in payment of interest on the capital required for this initial expenditure; if working expenses only had to be met, great reductions could be made in the charges made to consumers. The working expenses again are very largely fixed and independent of the number of persons served or the amount of service rendered. The cost of running a trolley car is practically the same whether one passenger or forty travel in it; the motorman and conductor must be paid, motor power supplied, track kept in repair, and management expenses met. Hence the cost of production per unit of service falls rapidly as the number of persons served increases, while a reduction in the output or use of the plant brings with it a less than proportionate reduction in expenses or cost of production. In these industries, therefore, unrestricted competition means inevitable ruin to the weaker competitor, and usually loss of all profit to the stronger. Prices or rates will be reduced until they are barely sufficient to cover the working expenses of the weaker firm and give no surplus to pay interest on its capital; the stronger firm (as a rule the larger) has lower working expenses per unit of service and can cut prices still further; as it steals its competitor's customers, its costs fall still further, and therefore its power to cut prices without actual loss is increased; by cutting it ruins its competitor, but only at the expense of sacrificing all profit itself. There is not the possibility in these industries that there is in other industries and in agriculture of extending the market indefinitely by reducing prices. The market is limited to the population reached by the plant and organization of the competing firms. Once this population is supplied, prices can be cut only at the expense of the profits of the competitors.

Competition, therefore, in the case of the localized services which we are considering, is difficult, wasteful, and futile: difficult because it is only possible by duplicating an expensive organization for a limited market; wasteful, because the services can be supplied at their theoretically lowest cost only if the whole market is served by a single plant or organization,

and in the case of communications, because efficiency is secured only by one system covering the whole market; futile, because the superiority of the stronger competitor is increased by competition, so that competition must result in the establishment of monopoly by the ruin or retirement of the weaker competitors.

II

Railways May Be Classed with These Industries

Railways as Monopolies. — Railways may be regarded as belonging to this type. It is true that competition between railways occurs and is not so wasteful as competition in the supply of gas, electricity, or street railway services. Different companies may offer alternative routes between the same terminal points and compete for the traffic between these points; and the duplication of plant which this competition involves is not wasteful, provided that the railways serve different districts *en route*. Still, complete efficiency requires one, and only one, *system* in each geographical area; and if the *parts* of the system are under the control of different authorities, complete efficiency will be attained only by the different authorities working together as if the whole system were the monopoly of a single authority. Railways are means of communication; the greater the area (or population) to which a railway gives access, the greater is the service rendered. Hence in countries where the railways have been constructed piecemeal by different companies, clearing houses were early established to facilitate this inevitable coöperation; the cases which have been known of competing companies, instead of dovetailing services, running trains between the same points at the same times, or arranging their trains so that they just do not connect with those of another company, are merely examples of the inefficiency due to divided control.

Competition Self-destructive. — Again, competition tends to disappear. If two railways begin rate-cutting against each other, the struggle can only end, unless it is ended earlier by agreement, in the ruin of the weaker. The stronger competitor is the company that can cut rates lowest without actual loss; by cutting rates it attracts traffic from its opponent to itself. This increase of traffic increases its margin of superiority, since this additional traffic does not involve a proportionate increase in working expenses, while the reduction in traffic which its opponent undergoes does not bring with it a proportionate reduction in expenses; about 80 per cent of the expenses of a railway are fixed independently of the amount of traffic handled — permanent way and stations have to be staffed and maintained whether much or little traffic passes. But though the stronger competitor can be sure to ruin the weaker, it does it at the sacrifice of its own profits. The working expenses of a railway are small in proportion to its capital; receipts must exceed expenses by something like a half, as a rule, if 3 or 4 per cent interest is to be paid on the capital embodied in the railway; a reduction on the receipts, therefore, of one-third will not reduce the dividend by one-third only, it will make it impossible to pay any dividend at all. Suppose that a railway has a capital of $50,000,000, its annual receipts $7,000,000, its annual expenses $4,000,000; the excess of income over expenses enables it to pay a dividend of 6 per cent on an average on its shares. Another railway is constructed, at a cost, say, of $50,000,000, and succeeds by cutting rates in attracting to itself half the available traffic. The expense to each railway of dealing with half the traffic will not be half of $4,000,000, it will probably be at least $3,500,000; the receipts of each railway will be only $3,500,000, since the two railways are now sharing the $7,000,000's work of traffic which the one had before. The result is that each meets bare expenses and pays no dividend; whereas, when one railway undertook the whole traffic with a capital of $50,000,000, it was able to pay 6 per cent on that capital, now that two railways with a joint capital of $100,000,000 share the work, no interest is paid at all. Now, the users of the railways gain something by the reduction in rates (*so long as the rate war continues*); but this gain is hardly likely to balance the social loss involved in applying $50,000,000 new capital and increasing working expenses from $4,000,000 to $7,000,000 to afford facilities for an increase in traffic which could have been afforded quite as well by a slight extension of the original railway and a slight addition to its expenses. Hence railway history in the United States and Great Britain is a history of amalgamations and absorptions, and of conferences and agreements, legal or illegal, to prevent rate-cutting. The effect of these agreements is not necessarily to abolish competition, but rather to substitute for competition in rates competition in facilities; but such agreements lead in many cases to a pooling of the entire traffic over competing lines, which is the abolition of competition.

Railway systems, then, like street railway systems or water supplies, tend to become monopolies. They have the characteristics of the localized services: large initial expenditure on plant and organization, working expenses largely independent of the number of persons served and amount of service given, a market restricted to the area in which the plant lies, and a practical monopoly of that market; competition is wasteful and ineffective, unified management and control are required by technical considerations to secure efficiency and economy of service.

III

Methods of Social Control of These Industries

Methods of Regulation. — The existence of important industries in which monopoly is a technical necessity introduces into the relations of the State to industry a complication unperceived by the early advocates of *laissez-faire.* What may be called the *normal* relation of the modern State to industry is indicated in the description often given to modern industry, "the *present competitive system.*" The modern State does not as a rule undertake to supply its members with their economic necessities; it leaves this work to the free enterprise of private individuals. To protect its members from abuse under this system of free enterprise — consumers from extortion and producers from underpayment — it relies primarily and normally on competition. It assumes that producers will be able to get fair payment by playing off one buyer against another, and that consumers will be able to get goods of satisfactory quality at a price somewhere near cost of production by playing off one seller against another. This is the general principle; but in the case of the industries we are considering the consumer is deprived of the protection of competition; there is no competing seller to whom he can appeal, if the first he applies to supplies an inferior article or charges an unfair price. The State, therefore, is faced with a new problem: if it continues to rely on and to foster competition, it encourages waste and inefficiency, and leaves the consumer at the mercy of the monopolist; if it departs from its usual principle it has to discover some other method of controlling industry in the interests of the consumer. In the United Kingdom and on the continent of Europe the necessity of monopoly, coupled with some special form of control, has usually been accepted, differences have arisen only as to the form which control is to take; in the United States there has been a much greater reluctance to depart from the principle of free enterprise, and attempts have constantly been made to stimulate and support competition. The influence of technical considerations, however, in promoting monopoly, and still more the fact that competition is self-destructive, have proved too strong for such

attempts, and even in the United States the policy of granting unlimited and unconditional "franchises" to gas, water, and street railway companies is coming to an end.

Function of the "Franchise." — These industries all involve a considerable disturbance of private property in the construction of their equipment; to acquire the compulsory powers, which such disturbance needs, they have to apply to the State; this application gives the State the opportunity of imposing conditions and exercising control. The permission to engage in any of these industries is usually embodied in a private Act of the Legislature or a "concession" or "franchise" from a local government authority. The State assumes that the monopoly is its property when it grants the company permission to engage in the industry. The grant transforms a tendency into a fact; technical considerations gave the industry a *tendency* in the direction of monopoly, the intervention of the State gives the monopoly *legal* sanction. With the grant are coupled the conditions which have for their object the protection of the consumer.

Limitation of Profit. — The simplest form of control is for the State to limit the rate of profit. The rate of interest which the company may pay on its share capital is fixed; any excess of earnings above that figure goes to the State (as in the case of certain French and American railways) or to the consumers in the form of reduced charges (as in the case of certain English gas companies and of some American public utility corporations). This method of control has two great defects; the *rate* of profit depends not on charges, but on capitalization on the one hand, and on efficiency of management on the other. It is possible for the concessionaries, by capitalizing the company at a high enough figure, to pocket the whole value of the monopoly in a lump sum, after which excessive charges will only pay a moderate *rate* of dividend. On the other hand, efficient management may by preventing waste and improving organization earn sufficient profit to pay a high rate of interest on a moderate capitalization without excessive charges; in which case to limit the *rate* of profit is to penalize efficient management without in any way benefiting the consumer. Instead of limiting the rate of profit the State may limit the charges which the company may make. The charges which English railways may make are limited by the Acts of Parliament constituting them; and since 1894 they have been allowed to raise rates only with the permission of a special court, the Railway and Canal Commission. Similarly in the United States railway rates have been under the jurisdiction of the Interstate Commerce Commission and of State commissions, while almost all other public utility rates and prices are subject to the control of various public bodies. This method of control is more effective than the last; the control is applied at the point at which the public is likely to suffer and the method is simple. Simplicity, however, has its disadvantages. The fixing of prices is the most difficult part of business, even in railways, and the setting of maximum rates by a State authority is an illogical compromise between making the State responsible and making the company responsible for rates. If the maxima set by the State are high, they are no protection to the consumer, since the company would, if left to itself, be deterred from raising rates to such a height by the fear of losing traffic; if the maxima are low, then the company's freedom to fix its own rates within the limits of the maxima is illusory. Maxima tend to become minima; if the companies are not to be allowed to raise a rate which proves unremunerative they will not experiment in lowering rates in the hope of attracting additional custom; which may be one reason why English railway rates, which fell quite steadily so long as the companies were free to raise them, have stopped falling since 1894, when the power to raise them freely was taken away. In the case of railways, at any rate, if the State is going to interfere with rates at all, it had better undertake the fixing of them altogether; and

if it undertakes the fixing of rates, which is the most difficult part of railway administration, it will be forced in the long run to undertake the entire management of the railways.[1]

Public Ownership and Private Operation. — Another compromise between private enterprise and public control is the system under which the State constructs and owns the plant, but leases it to a company to operate; French railways and English street-railways in most cases were originally under this system. The advantages claimed for the system are that it gives complete control without withdrawing the stimulus to enterprise and efficiency afforded by profit. The State can exact the full value of the monopoly as the price of the lease or in the form of rent; it can insert among the conditions of the lease any limits on rates and charges which seem desirable; it is relieved by the company of the task of dealing with large bodies of employees, a task from which it is contended that a representative authority, dependent on popular election, is unsuited, and the automatic check, which working for profit imposes on waste and inefficiency, is left unimpaired. Certain corresponding disadvantages are urged by those who advocate State operation as well as ownership of these services. The control is not complete and may be ineffective to protect the public; if rates and charges are fixed, the company can vary the quality of the service; the desire to make the most of the monopoly while the lease lasts is one incentive to extortion, the knowledge that the whole business must fall into the hands of the State on the termination of the lease is a check on enterprise and the investment of new capital. The slow development of electric street railways in England, a generation behind the United States, is usually put down to the fact that the street railway companies were liable to be superseded by the municipalities.

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[1] Under the stress of war railways both in England and the United States have been taken over by the government.

Public Ownership and Operation. — Finally, the State can both own and operate these services, as it does in the case of posts and telegraphs, railways on the Continent, and an increasing number of gas, electricity, water and street railway services in both Europe and America. This tendency has been opposed on the grounds usually taken against anything socialistic. By removing profits it is alleged you remove the chief check on waste and the chief incentive to efficiency. The best economic and political areas do not necessarily coincide; a population of 100,000 may be quite large enough for a separate municipal government, but is much too small for a separate electricity supply. Public management of these services, it is alleged, will result either in a bureaucracy as unaccountable to public control as any private employer, or in management by politicians who will be guided in their decisions not by technical knowledge, but by the agitation of voters as ignorant of technical considerations as themselves. In reply to such objections it is urged that it is only by supplying these services itself that the State can be sure of securing the profits of monopoly and protecting the public against extortion. The interest of the consumers, who can influence the management through their votes, is as powerful an incentive to efficiency as is the desire for profits under private enterprise. Each party to the controversy contends that in practice the method of management which it advocates shows the greatest efficiency and economy.

Extension of Public Ownership. — While the controversy continues, the tendency is for these monopolistic industries to be taken over more and more by the State. Moreover, the tendency is older than the controversy; a large number of city waterworks in the United States and municipal gas undertakings in England, for example, had been municipalized before any of the existing socialistic organizations had been founded. The tendency is the outcome of practical considerations, influencing city councilors and administrators who were uninterested in theoretical discussions on the province of the State. The services are all essential services, so essential that public control is of greater public importance than lowness of cost. The management of them is, compared with the management of any export industry, simple, since the market risks involved are so slight; foreign competition is impossible, the demand is steady and easily calculated, all the consumers are on the spot. Hence as the State extended its functions, these industries were naturally the first it would undertake. The industries are not only local in their services, but within their locality they serve a very large proportion of the population. Every one needs water, gas, or electricity, a postal service, street and steam railways; hence public management of these services means management by the *consumers* through their representatives, and these State and Municipal industries are merely a special case of the coöperative movement which we examined in the last chapter. In the case of the railways of continental Europe another consideration enters in. The States have all long land frontiers; the railways are therefore an integral part of the system of national defense. The governments wished the railway systems to conform to strategic as much as to economic requirements, and to secure this end they have undertaken a greater share in the construction and control of them than the governments of the United Kingdom and America had any need to do.

Relative Nature of Problem. — The question as to efficiency of management cannot be decided in the abstract, and is a political rather than an economic question. It is a waste of time to discuss what *the State* can or should do in the economic field as if the State were always and everywhere the same thing. "The State" is one thing in Prussia where there is a long tradition of administrative efficiency, another in the United States where the "spoils system" has not on the whole encouraged self-sacrifice and devotion in public officials, and where the tradition of *laissez-faire* is much stronger. " Municipal enterprise " means one thing in Cleveland, Ohio, where as a result of a progressive electorate men rule the city who give to the public service practically the same care and ability that they give to their own businesses; it means another in Philadelphia, where local government authorities are more under the influence of vested interests and professional politicians. Efficiency in these services depends more than on any other consideration on the appointment of the best men to the positions of direction and management; there is nothing in the nature of representative government itself to make one think that a municipal committee or State department will be more efficient or less efficient than the directorate of a corporation, that officials appointed by the one will be more efficient or less efficient than officials appointed by the other. In both cases jobbery and influence are possible; and while corruption is a greater evil in the public service than in private trading, a comparison of governments in different countries, or in different areas of the same country, does not suggest that there is least corruption where the government restricts its activities most, but rather the reverse. The limits within which " the State " can undertake economic services are set not solely by economic considerations, but at least as much by the public spirit and social traditions of the citizens.

CHAPTER VIII

MONOPOLY AND COMBINATION (*Continued*)

I

The Tendency to Monopolistic Combination

Private Business Monopolies. — The tendency to monopoly is not confined to industries in which technical economy requires monopoly; it is found in many branches of industry where technical considerations do not necessitate it, and the motives which lead competitors to combine and eliminate competition are found in every field of economic activity. Competition among sellers tends to force prices down, the interest of sellers lies usually in keeping prices up; this is usually the first motive inducing producers to combine. Competition, again, introduces new risks and accentuates the risks inherent in a system of production in anticipation of demand. In a competitive industry every producer has to estimate not only the total demand for his product, but also the amount that his competitors intend to produce and the proportion of that total demand which he will be able to supply; a monopolist, controlling and therefore knowing exactly the supply, would have to estimate only the demand, and would run little risk of " spoiling the market " by glutting it. Competition diminishes profits in another way. We speak of *the market* for any product, as if competition were always active throughout the area and between all the sellers of the product. In practice such a market is made up of a large number of smaller markets determined by locality, interest, custom; every firm has its own "market," consisting of a number of customers who normally can be relied on to deal with that firm; their custom constitutes the firm's "goodwill." When trade is bad, however, the barriers between these subordinate markets are broken down, local markets are invaded by the products of firms at a distance, "goodwill" goes for nothing. The desire to prevent this invasion of their market, to secure their market and a steady trade by depriving their customers of any alternative source of supply, is a chief motive of combination, patents, brands, trade-marks and all other forms of monopoly.

Corners. — Monopolistic combinations have been classified by Mr. Macrosty in accordance with their relative permanence. The lowest form of combination is the temporary combination of dealers to get control of the supply of a product for a limited period and force prices up. Such operations on produce exchanges are called "corners," and are tempting to speculators on those markets in spite of the risk of failure, first, because they can get control of the produce coming into the market by paying "differences" only, not the entire price of the produce, and, secondly, because the other dealers on the market, having sold for future delivery without foreseeing the "corner," will be forced to buy at the monopolist's price, or fail to meet their obligations; they cannot wait for prices to come down.

Price Agreements. — Next in order come informal agreements among dealers to observe a price list. Such agreements, constantly broken and constantly renewed, until they acquire a sort of sanction in the "custom of the trade," have always existed, especially among retailers, and, in the opinion of Mr. J. A. Hobson in 1906,[1] extracted more from the consumer in the way of excessive prices than all the trusts and industrial combinations put together. Such agreements have

[1] *Evolution of Modern Capitalism*, p. 191.

given way in many cases to formal associations, with constitutions and officials to fix prices and regulate terms of sale. The weakness of these associations is that by raising prices they encourage their members to increase their output. The market will not take the increased output at the old price, and the temptation to secure the large profits, which must accompany the increased sales of the first firm to break the agreement and cut prices, is usually too strong to resist. Hence price agreements often develop into agreements to control output as well as to maintain prices; and these in turn, since the temptation to secure additional trade by cutting prices below the agreed list is still in some cases too strong, give way to arrangements by which the entire trade is pooled and the receipts shared in certain fixed proportions. In England and the United States agreements of this nature, however comprehensive, are always insecure, because they cannot be enforced at law. The Common Law regards agreements in restraint of trade as contrary to public policy; consequently, if one of the parties to an agreement of this nature breaks it, the other parties cannot sue him for breach of contract or force him to pay any penalty which the rules of the association may impose. The Sherman Anti-Trust Law and the various state laws of like import forbid and directly penalize such agreements.

Trusts. — Hence the price agreement or "pool" does not constitute a complete fusion of interests; there is always a strain on the loyalty of some, especially the stronger, of the parties to it. When trade is good, all can do without the association; when trade is bad, it may always pay the stronger members to break away, and, by cutting prices, capture their competitors' market. Profits depend on output or turnover quite as much as, if not more than, they do on prices. Hence the leaders of industries, who desired to effect a complete fusion of interests, have been forced in the United States to amalgamate the competing firms into one, and form what is usually called a "trust." The term "trust" was originally applied to a device for fusing interests *without* complete amalgamation; a corporation was formed which acquired, usually in exchange for its own stock, a bare majority of the shares of each of the competing firms in the industry; a bare majority of shares in a corporation gives complete control of the company; hence the central company, the "trust" proper, could control all the firms in the trade. But this device was declared illegal as being in restraint of trade, and the complete amalgamation took its place. Amalgamation may be effected by an exchange of shares between the combining companies; but usually a new company is floated and buys the separate firms.

The "Kartel." — In Germany the Common Law rule is different, and agreements to regulate prices can be enforced in the courts. This difference has made possible federations as permanent and secure as the complete amalgamations of the United Kingdom and America. In the kartel, the typical German combination, the competing firms combine to establish a single selling agency. They agree with one another by a legal contract to sell to this central selling agency alone, and the agency undertakes to take their whole output; in the same contract the proportion of the entire output which each firm may produce is settled. By this arrangement the single agency acquires control of the product of the whole industry, and can vary prices — and, with the consent of the members, output — to secure the greatest possible net profit. At the same time the firms retain their independence for purposes of internal management. Thus the kartel retains separate management of production while securing unified management of selling.

Difficulties of Combination. — After allowing for all the difficulties of successfully working a monopoly, it is surprising that there are not more industrial monopolies; but combinations, though attractive, are not easy to form. The first obstacle to their formation is the difficulty of bringing together to a common agreement a number of firms that have known one another previously only as competitors; the feeling of hostility and emulation persists even when the loss and worry involved in fighting have been recognized. This feeling is reënforced in the case of many private firms by a pride in, and attachment to, their independence, which they are unwilling to sacrifice even on advantageous economic terms. The inequality in competing strength of the separate firms in most industries is another obstacle; the strong firms can get along very well without the aid of a combination, while a combination that did not include them would be unable to control the market. A period of bad trade, following on and contrasting with a period of good trade, is usually needed to produce the state of mind in which projects of combination are generally welcomed; when trade is good, every efficient firm can get its prices without the aid of combination, the scramble for orders on a declining market is needed to remind producers of the folly (from their point of view) of competition. The mere task of negotiating a combination — inducing competitors to meet, adjusting conflicting interests, allowing "goodwill," and settling the terms generally on which the separate businesses are to be taken over — is formidable, and calls for a high degree of diplomatic skill and business statesmanship.

Extent of Combination. — For these among other reasons few industrial combinations that have been formed have been inclusive of the whole trade. Some firms in the market have stood out, or, if the combination was originally inclusive, new firms have come into the market. If only a small proportion of the trade, however, is outside the combination, its influence over prices will not be seriously impaired; a combination with 70 per cent of the trade in a market is in practically as strong a position as one with 100 per cent; the latter's control of prices is usually as strictly limited by *potential* competition.

A more serious outcome of the difficulties attending the formation of combinations is that they are nearly always over-capitalized, and this in two ways: the actual capital engaged in the industry may be greater than is needed to satisfy the *normal* demand of the market at a remunerative price; and the nominal capital on which dividends are paid, if any profits are earned, may be so much greater that dividends become the exception rather than the rule. A trust is formed at the end of a boom; during the boom old firms have expanded and new firms have been established, with the result that when trade becomes normal, the product which the industry can put on the market is far greater than the market will take at a price high enough to repay the cost of production; yet the whole of this producing capacity has to be brought into the combination, or the object of the combination, monopoly, will not be achieved. When the United States Steel Corporation was formed it had a producing capacity more than half as great again as the normal output of the United States heavy steel industry, yet it did not include the whole trade. The organizers of a trust, to secure a monopoly, have to induce all or most of the firms in the industry to come into the combination; this is known, and the knowledge induces firms to stand out for a higher and a higher price as the number of outstanding firms decreases; it is said that the largest of the firms which were combined in the United States Steel Corporation was able to insist on a price 50 per cent higher on the same valuation as the other firms, and to secure payment exclusively in bonds. Hence the public, in being asked to take up the shares of the new trust, are being asked to pay a price for the industry as a going concern often far higher than is justified by the earnings of the industry even in a trade boom. In addition, the profits which are expected from monopoly are often capitalized and added to the price at which the investing public is asked to purchase the industry, while no allowance is made for the reduction in output which will be necessary to keep prices up and for the disuse of plants which have only been bought up to extinguish competition. Indeed a principal motive of the promoters of trusts is the profits which they can make at the expense of the investing public; the motives of the investors in submitting to be fleeced are more difficult to understand. In the case of kartels, where the only new company formed is the selling agency, which has usually a nominal capital held exclusively by the constituent firms, the corresponding difficulty lies in determining the total output and the participation in it to be allotted to the different firms. To allow every firm to produce to its utmost capacity would flood the market and make it impossible to keep prices up; yet the stronger firms will not join the kartel if they are to be prevented from taking advantage of their strength. Hence the kartel is often committed at the outset to an amount of production so great that it has to offer bounties on export to its constituent firms, to induce them to send some of their output into foreign markets; just as the American trust practices "dumping" abroad in order to keep up prices in the protected home market.

II

Conditions Favorable to Monopolistic Combination

Narrow Localization. — The formation of a combination is facilitated if the industry is localized. If the firms to be combined are situated close together, their heads will frequently meet, will know one another and one another's circumstances, and be predisposed to combine. Probably joint action to restrict the severity of competition will have taken place before the proposal to eliminate competition by combination is mooted. Bonds between the separate firms will already exist in the local trade associations for marketing, securing technical efficiency, and dealing with labor. The importance of this influence is illustrated by the difficulty of forming, and still more of maintaining, international combinations and agreements; they may be expected to come, but at present their stability is as inferior to that of national and local combinations as are international alliances and international law to national associations and national laws.

Restriction of Competitors. — While the influence of locality is important, however, the condition that most favors monopolistic combination is some natural or social limitation on the number of firms engaged in an industry. When an industry can be carried on only on a large scale and with large capital, it is difficult for new firms to enter it, and the way is made open for combination among the firms in it. For this reason the heavy steel industry has proved a favorable field for combination, and the companies carrying on liner traffic, few of which in England have a capital of less than half a million pounds, are all in rings or conferences. Any kind of natural scarcity in an industrial material favors combination; the anthracite coal industry is controlled by close combinations both in England and America, and the petroleum industry has the most famous of trusts. Climate may have this effect; one of the most successful English trusts is the Fine Cotton Spinners' and Doublers' Association, which carries on a trade restricted by climate and skill to a small area in Lancashire. Soft water for bleaching and dyeing, and a prescriptive right to turn an objectionable effluent into streams, have been of influence in the formation of combinations. Even more favorable to concentration is some previously existing element of monopoly, such as that afforded by the possession of patent processes, distinctive brands, and trade-marks; the chemical and aniline dye industries are concentrated on the basis of patents, the tobacco and snuff industries on their brands, the American chewing-gum industry and English cocoa industry on their flavors. The State may limit entry into a trade; when it does so, it encourages combination; saloons and railways are examples. The control of one monopolistic industry naturally limited may be used as a means of securing monopoly in another; railway discrimination was one of the means by which the Standard Oil Trust was formed, and was also largely the basis of the Chicago Beef Trust.

The Tariff. — One influence favoring trusts requires special treatment, since it is often put forward as the only cause of combinations, namely, the influence of a protective tariff. That it is not the only influence is shown by the fact that monopolistic combinations exist and are growing in the United Kingdom under Free Trade; that it is a condition favorable to combination is suggested by the greater development of the combination movement in the United States and Germany. A protective tariff seems to encourage and to facilitate combination. The way in which it encourages combination is illustrated by the history of the Sugar and Whisky Trusts in the United States. The high protection afforded to these industries encouraged such a rush of capital into them that competition within the protected market became much keener than competition outside; excessive competition led to price-cutting and loss all round, and encouraged the competing firms to combine as the only means of avoiding bankruptcy. How excessive was the overproduction produced by the bait of a protected market is indicated by almost the first action of the two trusts formed; the Whisky Trust closed down sixty-eight of the eighty distilleries it took over, the Sugar Trust seventeen of its twenty-three refineries. A protective tariff facilitates combination, since it offers competing firms freedom from foreign competition, and therefore a monopoly of the home market, if only they can agree to extinguish competition among themselves. The control of a national market is much more of a "business proposition" than the control of a world market. Certainly the first thing a protectionist government will do, if it is seriously opposed to the trust movement, will be to lower or abolish its tariff. Trusts not only owe much to tariffs, but react on them by enormously strengthening the interests opposed to the reduction or repeal of protective duties.

III

Difficulties of Monopolistic Combinations

Difficulties in Internal Organization. — The troubles of the would-be monopolist are not ended when his combination is formed. If the monopoly is an amalgamation and over-capitalized, ordinary good management is not sufficient to produce dividends; if it is a pool or kartel, there will be constant quarrels over the proportions in which the trade is distributed among the constituent firms, and big firms will upset the equilibrium of the organization by buying up smaller firms and absorbing their rights in the trade. No monopoly again, however complete, is unaffected by the general fluctuations of trade. In times of declining trade the German kartels have been forced to adopt the expensive device of paying bonuses on export in order to keep up prices in the home market, the only market where their monopoly is effective; the American trust meets the same difficulty by the practice of " dumping " a portion of its output abroad at any price. When we were studying the relative advantages of large- and small-scale enterprise, we found that one of the difficulties of the large concern was that the difficulty of management was out of all proportion greater in the case of the large concern. Similarly the concentration of the management of a whole industry into a few hands is economical, as will be seen in a moment, provided that the few hands are equal to the task; at the same time there is a risk involved, the risk of putting all the eggs into one basket, and several incidents in the history of the trust movement emphasize this risk. The great Steel Trust was formed, it has been said, to remove Mr. Carnegie from the industry before he had absorbed the whole of it; having achieved their object and removed Mr. Carnegie, the promoters were unable to find any one who could do the work which Mr. Carnegie had been doing; men who can organize from one center the whole of a great industry are difficult to find. The mammoth business in competitive industry is usually based on exceptional ability, and industrial combination is no adequate substitute for such ability. Henry Ford standing alone has been the envy of every trust promoter.

Substitution and Potential Competition. — The power of the trust over prices is limited not only by the general movements of trade, but by two less obvious but even more important influences, the competition of substitutes, and potential competition. Just as a railway plying between two ports has to limit its rates to the figure at which goods can be sent by water, plus an allowance for the greater convenience and speed of railway transport, so an oil trust must not raise its prices to the point at which it pays consumers to install gas or electricity, or to revert to candles. The United Alkali Company was formed to include *all* the firms using the Le Blanc process of making alkali and bleaching powder; the effect was to stimulate invention, until the electrolytic method of making bleaching powder, already known in the laboratory, was made commercially profitable. The French Copper Syndicate of 1888 foundered on the same rock, the competition of substitutes. The other influence, the danger of stimulating competition where it does not already exist, is naturally more difficult to illustrate; just as the possibility which exists under the English constitution of creating new peers converted the House of Lords' Veto from an absolute to a suspensory veto, although the power has not actually been exercised for two hundred years, so the possibility of attracting competition converts a monopolist's control over prices from an absolute control to fix them where he will to the more limited power of delaying a fall and speeding up a rise; the example of the Steel Trust, however, is sufficient to indicate what is possible. The trust began its career with 80 per cent of the heavy steel trade of the United States; its capacity was great enough to produce nearly 60 per cent more than the greatest actual annual output hitherto reached in the United States; at the end of eight years, though its productive capacity had increased, its share of the trade had sunk to 50 per cent. The case is the more significant, since it occurred in an industry in which a large capital is needed to establish a new firm and the trade risks are great. A monopolist, by raising prices or doing anything else to suggest that he is earning exceptional profits, tempts other capitalists to enter the industry; and it should be noted that they are tempted not only by the prospect of sharing the profits if the prices remain high, but also by the alternative hope that the monopolist will be induced to buy them out on their own terms, if the competition forces prices down.

IV

Advantages of Monopolistic Combination

Productive Advantages. — It has been necessary to give some space to explaining the obstacles in the way of establishing monopoly in competitive industry, because it is at first sight surprising that the trust movement has not developed further than it has, and that its history is strewn with so many failures. In spite of failures, however, the development of the movement proceeds; apparently we may expect the "combine" of firms to become as normal in the twentieth century as the large firm has become in the nineteenth; for, while the chief *motive* of combination is the desire for monopoly, and complete monopoly is rarely achieved, the *result* of combination is a possibility of economies so great that complete monopoly becomes unnecessary for high profits. That it is by economies rather than monopoly that great profits are made is suggested by the success of those "trusts," like Messrs. J. & P. Coats, the thread manufacturers in England, and the General Electric Co. in the United States, which were formed by the amalgamation of a small number of strong firms without any attempt to comprehend the whole trade, and of those great firms, such as the Carnegie Steel Works and the Ford Motor Company, which have grown from small beginnings without any attempt to secure monopoly, and have come nearer to monopoly than most combinations which set out with monopoly as their object.

Eliminating Competitive Wastes. — What then are the special economies within the reach of these trusts? They are simply an extension of the economies of large-scale production, and very similar to the economies of localized industry. Just as the large firm can specialize departments, the trust can specialize firms. If it is a combination in a localized industry, some such specialization will have arisen already, and the trust will merely arrange that the firm with a specialty shall devote its whole resources to that specialty. The trust is able to carry the specialization of labor further and to retain more highly specialized skill; its ability to retain the best legal skill has been frequently illustrated. With its central control of the industry it can develop resources, such as the pipe-lines of the Standard Oil Trust, which no smaller corporation could finance. Many trusts have taken steps to secure the sources of their raw material. Along with the economies of greater specialization goes a saving in general expenses. To sell its goods, a firm in a competitive market has to maintain a system of travelers, agents, advertisements, which is constantly growing in expense. One firm, to give it a competitive advantage over the other firms, adopts some new advertising device; all the other firms are forced in self-defense to follow suit; the result is that none gains any advantage over the rest; they are as they were, but the expense of the advertising device has been added to the normal costs of the trade. A trust can reduce this kind of expenditure, or at least stop its growth. One set of travelers can now take out the samples of as many firms as there are in the combination; the trust, if it advertises (as it usually must), can regulate its expenditure on advertising itself, instead of having expenditure constantly forced upon it by competitors. The centralization of purchases and sales may allow of saving, certainly the centralization of finance and insurance should be an economy. Above all, it is a great economy to *know*, instead of having to guess, how much of their product is going to be put on the market; nothing is so conducive to cheap production as a steady output, no obstacle to a steady output is so great as the action of a large number of producers acting independently, each endeavoring to steal the other's trade and uncertain what proportion of the aggregate demand of the market he can safely offer to supply. A minor economy arising from central control is the saving of transport charges in the form of cross freights, by supplying customers from the nearest plant.

Competitive Advantages. — All these are social as well as private economies, since they mean an equal output for a less expenditure. The combination, however, has certain advantages over the independent firm in securing trade and controlling prices, certain *competitive* advantages as distinct from the *productive* advantages we have considered so far. The first of these is the boycott. If a trust has control of a large proportion of the supply of any commodity, the larger users of the commodity will probably be unable to meet their requirements without buying from the trust at times. The trust can then refuse to supply them unless they undertake to buy exclusively from the trust; by boycotting its competitors' customers it can force them to boycott its competitors. A slightly different method of securing the same end, a monopoly of custom, is the method of the shipping conferences: a rebate, usually of 10 per cent, is allowed on all freights to shippers who confine their freights to the lines in the conference. The second weapon of the trust is price differentiation. Where the trust has a monopoly it can keep prices up; with the revenue derived from these high prices at its disposal, it can afford to cut prices to bare prime cost of production in markets where it has not a monopoly, and so drive out its competitors. Under competitive conditions coal is cheapest at the pit-head and increases in cost as the distance from the pit increases, owing to transport expenses; the Westphalian Coal kartel charges its highest prices in the coalfield itself, and reduces them in successive zones to meet the competition of coal from other coalfields. Differentiation is possible not only between districts but between individuals; under competitive conditions a buyer who found that the firm he was buying from was supplying some one else at a lower price would take his custom elsewhere; under monopoly he has no alternative. Trusts cut prices on a bigger scale, naturally, than independent firms when they do engage in price-wars; with their enormous capital and predominant control of supply they can hold out for a rise longer, and resist a fall in price longer, than a single firm with competition to think of. Their chief competitive advantage, however, is perhaps their knowledge of the supply; in bargaining with customers, the trust knows, the customer does not know, what the available supply is; hence the trust dare, and the customer dare not, stand out for its price.

V

Vertical Combination

We have been concerned in this chapter with the attempt to secure a monopoly of an industry or of one stage in an industry by the combination of all or most of the firms engaged. It should be noticed that there is another form of combination, which has different objects, although it may tend ultimately to the establishment of monopoly. This is the combination of firms at different stages in the same industry, " vertical " combination as it has been called in contradistinction to the " horizontal " combination, which we have been considering. It is due to the same pressure of competition on profits as leads to horizontal combination; it seeks to escape from the pressure, however, not by combining competitors at the same stage, but by combining a firm with firms that supply it with its raw material or take from it its product. Such combination can be most easily effected by the purchase by one company of shares in the companies from which it usually buys its materials and to which it sells its product. This kind of combination is often a step towards the other kind of combination, because competitors will often associate to acquire control of one of the sources of their raw material or for one of the outlets for their product, and, having once associated for that purpose, end by associating for all other purposes as well.

CHAPTER IX

MONEY

I

Money and Coinage

Barter and Exchange. — The modern producer is always a specialist; every one in modern society derives his income from specialized labor or specialized property. This specialization is, we have seen, possible only because the specialists coöperate: each by himself is incapable of satisfying his simplest material wants, together they can produce all that all need. The specialists, therefore, must *exchange* their specialties. Exchange may take place in two ways, directly and indirectly. The direct exchange of goods we call barter, the indirect exchange, through some medium, we call buying and selling. Barter is impracticable as a rule in a modern society, since it involves what has been called a " double coincidence of wants "; under a system of barter, the barber who wants bread has to find not merely a baker but a baker who wants his hair cut, the baker who wants his hair cut must find not merely a barber but a barber who wants bread. Even when two people who want each other's services have come together, they may be unable to agree as to terms; the baker may consider two loaves a fair equivalent to three hair-cuts, while the barber demands a loaf each time he cuts the baker's hair. The degree of specialization which characterizes modern industry could never have been reached under a system of barter; it is too minute, too complicated, too extensive both in space and time; the increasing use of money was both sign and cause of the transition from the primitive to the modern economy.

Variety of Exchange Media. — The medium of exchange may be almost anything, provided that it is *generally acceptable.* The sole object of having a single medium of exchange is to obviate the inconvenience of barter, and the inconvenience remains if some sellers refuse payment in the medium. The reason why a man with anything to sell will always accept payment in money is that he knows that every one from whom he may wish to buy will accept money in payment; if any number of people refuse to accept the medium in exchange for their goods, then its usefulness disappears. Cattle, slaves, tobacco, salt, leather, beads, silver, gold, paper, and several other things have in different countries and at different times been used as the medium of exchange, and, consequently, as the standard of value. They served just so long as they were generally acceptable; they gave way to something else, or to barter, when for any reason many people hesitated to accept them in payment for goods.

Importance of " Intrinsic " Value. — Though paper money *can* circulate (under conditions explained later), it has been found in practice that the only way to secure in your medium of exchange this fundamental quality of general acceptability is to choose as your medium some commodity which has a utility for other purposes than facilitating exchange. Tin counters would pass from hand to hand as easily as golden sovereigns, and would make as good a medium of exchange, *if* people would accept them; but in practice it has been proved over and over again that people will not part with their goods in exchange for counters with no inherent utility; in the long run they have confidence only in money which derives its value not from the fiat of governments but from its intrinsic physical properties. The use of bank-notes, checks, and bills of exchange may seem to contradict this principle, since the paper of which they are composed has no relation to their value. The contradiction is only superficial; bank-notes and other credit instruments are legal documents giving the owner a legal claim to so much gold, and it is only because they represent this claim that they are acceptable; if anything happens to create doubts that the claim will be met, they lose their acceptability immediately. So far from being valueless, because the paper on which they are written is valueless, they are forms of property in just the same sense as bearer Stock Exchange securities or the copyrighted manuscript of a book; they are the title-deeds of property in bullion.

Standard of Value. — Money is not only the medium of exchange; it is also the standard of value. Since most exchanges take place through the medium of money, most goods and services come, at some time or other, to be compared with money. There is nothing else with which they are so regularly compared. Hence the medium of exchange becomes a common denominator of the relative values of different goods and services, and their values are usually stated in terms of money, *i.e.* as prices.

Precious Metals as Money. — The reason why the precious metals have superseded other commodities as money will now be evident. They have to a greater degree than any other commodity the qualities required in a medium of exchange and standard of value. They are compact; silver displaced copper, and gold silver, as standard money, because large payments in copper or silver were so cumbersome. They are durable; it has been estimated that it would take eight thousand years for a five-dollar gold piece to wear out completely — cattle are conspicuously lacking in this quality. They are divisible without loss of value; in this quality cattle and most early forms of money are again conspicuously lacking, and precious stones, which have most of the other qualities required in money, fail in this respect.

Characteristics of Precious Metals. — Gold and silver are easily recognizable, a quality necessary to check counterfeiting. Finally they are not subject to great changes in quantity. This last quality is most important in a standard of value; one does not want one's standard of other things to be constantly changing itself. Corn, for example, would make a bad standard of value, because its quantity changes with every change in the weather and other conditions that affect the harvest; a suit might exchange for a quarter of corn one year, and the next year, although the demand for suits and the conditions governing the supply of them remained unchanged, might exchange for a quarter and a half of corn, a record harvest having occurred in the interval. Gold and silver, on account of their great durability, are less subject to such changes than any other commodities; each year's product is merely a small addition to an enormous stock already existing. Paper documents are even more compact, divisible, and recognizable than the precious metals, and will therefore make a more convenient currency, provided that they can be given that quality of general acceptability which the precious metals possess by virtue of their rarity and intrinsic beauty.

Coinage. — For convenience of handling and exchange gold and silver are usually *coined*. At first they were measured by weight; a " pound " was a pound weight of silver. The process of coining was merely the authoritative stating and guaranteeing of weight and quality, to save the trouble of weighing and testing the metals each time a purchase was made. Metal stamped by authority in this way circulated more freely, because it was more convenient, than unstamped bullion. Governments made it the legal medium of exchange, and assumed the monopoly of the coining process. Usually the Government, in return for the convenience of coined money, would make a charge, putting less than a pound's weight of silver into a pound of money; this profit or charge for coining is called *seigniorage*. To-day most governments take no seigniorage, *i.e.* make no profit on the coining of bullion. In some cases they take what is called *brassage*, *i.e.* they keep back out of the metal coined a quantity just sufficient to cover the cost of the coining process. In the United Kingdom even this charge is not made; gold is taken at the Mint and coined into sovereigns without charge, one ounce of gold (eleven-twelfths fine) into $3\frac{143}{160}$ sovereigns. In practice, however, the holders of bullion take it not to the Mint but to the Bank of England, where they are credited with £3 : 17 : 9 for every ounce of gold (eleven-twelfths fine), instead of £3 : 17 : 10½, the exact equivalent; the sacrifice of 1½*d.* on the ounce of gold is made up for by the saving of the time taken by the process of coining. In the United States a brassage charge is made to cover the cost of preparing the bullion for coinage. No charge is made for coinage itself. An ounce of gold at the United States mints is worth 20.67. Practically all the gold mined in the United States goes in first instance to the government.

Legal Tender. — Any commodity will serve as the medium of exchange, provided that it is generally acceptable; general acceptability, however, as a rule is enjoyed only by a commodity selected by Government as medium of exchange and " coined," or otherwise given the stamp of authority. The regulation of contracts is one of the most elementary functions of the State, and the contract of exchange, or sale and purchase, is one of the commonest and most important of contracts. To facilitate exchange the State selects one or more commodities as its standard money; it makes it standard by giving it full *legal tender*. In the United States gold coin is full legal tender, *i.e.* the offer of it must be accepted in settlement of any debt. In addition, some subsidiary coins are usually issued as small change, which are legal tender to only limited amounts, being considered merely *token coinage, i.e.* representative of the standard money, although in the United States the silver dollar enjoys full legal tender power. On the subsidiary or token coinage the mint makes a large profit, since the face-value is always greater than the bullion-value. It follows that metals used for token coinage are not given the right of free coinage; to grant free coinage would be to make the owner of the metal a present of the difference between the bullion-value and the face-value of the coin. It follows also, for reasons that will be apparent when we have studied Gresham's Law, that the Government can issue only a limited quantity of token coinage, and must limit the amount to which it must be accepted as legal tender. In the United States fractional silver and copper coins are token coinage; fractional silver is legal tender only to the amount of five dollars, the five-cent piece and the bronze cent only to twenty-five cents.

II

The Single Standard

Freedom of Coinage. — When we say that the medium of exchange is selected by the State, it must not be thought that the State can select anything, and, by selecting it, force people to accept it. If for any reason the currency issued by the State and given the quality of full legal tender is not liked, it ceases to facilitate exchange, and becomes one of the greatest obstacles known to exchange. General acceptability, though increased by the State's action, is given to a commodity only by intrinsic utility; and money to do its work must therefore possess intrinsic utility or give a claim to something with intrinsic utility, in addition to receiving the stamp of the Mint. To insure this association of intrinsic utility with standard money, the metal selected as standard money is usually given the right of *Free Coinage;* this means that the Government will accept for coinage any amount of the metal. In the United States this right is possessed only by gold; the Mint will always accept gold and turn it into coin, while silver, nickel, and copper are coined only on Government account. If a Government charges brassage or seigniorage on its coinage, this is no limitation of the right of free coinage. The object of giving the right of free coinage to a metal is to insure that its value as bullion and its value as coin will always bear the same relation; in the United States $20.67 and an ounce of gold are always of equal value, since the ounce of gold can at any time be turned into the $20.67. The reason for this provision will be clear when we have considered Gresham's Law.

Bimetallism. — Must there be only one standard of value, or may there be more than one? Until the nineteenth century governments saw no objection to maintaining two standards of value in circulation at the same time, namely, gold and silver. In 1816, however, the United Kingdom demonetized silver, *i.e.* deprived silver of the legal attributes of full legal tender and free coinage, and all the other chief commercial countries have followed suit. Governments were forced to this action by the logic of facts; the double standard was an illusion, in reality *either* gold *or* silver, not both, was the standard of value even when both enjoyed the privileges of standard money. Why this was so will be clear from an example.

The coinage system of the United States was established by an act passed in 1792 and was based on Alexander Hamilton's famous Mint Report. A bimetallic system was provided, namely with both gold and silver standard money at a ratio of 1 to 15. One ounce of gold, in other words, was equal for coinage purposes to 15 ounces of silver. In the market, however, the ratio was 1 : 15½. The result was an undervaluation of gold in terms of silver for monetary purposes. Under the circumstances practically no gold was brought to the mints for coinage purposes, and the real standard was for the time being simply silver. During the period 1834–1837 several changes were made in the coinage laws the net result of which was a readjustment of the legal ratio from a 1 : 15 to a 1 : 16 (15.988) basis. But the market ratio remained at the 1 : 15½ level. Silver was thereafter the " dearer " metal for coinage purposes and began to disappear from circulation. After the gold discoveries in California in 1849 the market ratio declined to a level even below 1 : 15½, thus broadening the discrepancy between the market ratio and the legal ratio and hastening the withdrawal of silver from the monetary circulation. By 1853 the situation had become so serious that a Subsidiary Coinage Act was passed reducing the bullion contents of the silver fractional money and thus giving it a coin value greater than its bullion value and discouraging its further melting or exportation as bullion. In other words, in this period the standard became gold, and silver was supplanted. Silver was practically demonetized by the act of 1873 but it was not until 1900 that the government of the United States went definitely and unequivocally on a gold basis.

Thus, even when a Government tries to maintain the two metals in circulation together as standard money, it fails, because the relative value of the two metals is constantly fluctuating with the varying rates of their production; the metal undervalued by the mint tends to disappear from circulation, so that the country is really on a monometallic basis, the metal overvalued by the mint being the actual standard of value. Only if the chief commercial countries of the world combined to maintain both metals in circulation could this result be prevented. The use of them as coin is much the most important use of the precious metals; a " combine " of mints therefore could control the bullion market and fix the values of bullion, just as any strong combine can to some extent control values. Then a fixed ratio between the two metals could be maintained in the bullion market, and no divergence between the Bullion Ratio and the universal Mint Ratio need occur. Such a treatment of the precious metals would constitute not a *double standard* but a *joint standard;* its advantage over existing monometallic monetary systems would lie in the fact that the value of gold and silver together would probably fluctuate less than the value of either gold or silver separately. It would also get rid of the difficulty caused by the absence of a par of exchange between gold-using and silver-using countries.

III

Gresham's Law

Explanation.—The disappearance of the undervalued metal when two metals are minted as standard money is only one illustration of a general tendency, that has been called " Gresham's Law," after an Elizabethan finance minister who was supposed (incorrectly) to have discovered it. The tendency is for " bad " money to drive out of circulation " good " money. " Bad " money may be either coin, the value of which as metal is very much less than its face-value, or paper, which cannot be exchanged for good coin. Coin may become bad money by being clipped or sweated; or the Government may have debased it by increasing the proportion of alloy or reducing the weight without changing the denomination. The English pound declined from 4995 grains of silver in the eleventh century to 288 grains in the reign of Edward VI. Or a change in the ratio of gold to silver in the bullion market may, as in the case of the English guinea, destroy the identity between the face-value and the bullion-value of one of the two metals. Paper money becomes bad money whenever it is issued in excess of the requirements of the community for a medium of exchange; it usually is issued in such excess when it is the only form of currency. Gresham's Law may operate in more than one way. The bad money will be used to pay debts, while the good money is hoarded; every one tries to get rid of a bad shilling, so that bad shillings circulate. The good money disappears chiefly, however, by being exported; the Government cannot compel *foreign* merchants to accept its bad money in payment of their debts, they will usually accept only money which is worth no less as bullion than as coin; hence the good money is constantly being saved up to pay foreign debts, and so leaves the country.

Essential Conditions. — This tendency operates only if two conditions obtain: first, that there is no scarcity of money. A certain amount of money is needed at any time for commerce; if this amount is not forthcoming, then the need of money will prevent that hoarding and export of "good" money which usually cause its disappearance. Governments, by allowing no free coinage and by regulating the amount of money in circulation themselves, instead of leaving it to be determined by the production of gold and the action of banks, can make almost any kind of money circulate; such regulation is, however, a delicate and difficult business owing to the constant change in the need for money, due to trade-fluctuation, and still more to the fact that trade is not confined within the boundaries of the State, while the authority of the Government is so confined. The second condition is that the "bad" money actually circulates. If the business community refuse to have anything to do with it, as the people of the Pacific States did with the greenbacks of the Federal Government during the Civil War, the issue of the "bad" money will not affect the circulation of the "good."

IV

Paper Currency

Inconvertible Paper. — There are many substitutes for metallic money. The first is inconvertible paper currency, which has sometimes been called "fiat" money. It is made by the mere statement by a Government that such and such a piece of paper is such and such an amount of money. Sometimes the statement takes the form of a promise that payment in metal will be made; since the promise is indefinite, and is not intended to be fulfilled, the difference of form is unimportant. Such money is put into circulation by the Government using it to pay its debts. It circulates because the Government forces its debtors to accept it, and authorizes them to settle their debts with it also. Such money, as Ricardo pointed out, is simply money with a seigniorage of 100 per cent. In the long run the Government does not make all profit, since the money comes back to it in payment of Government dues and taxes. The danger of the issue of such money is that it will be overissued — *i.e.* issued in excess of the needs of the community for a medium of exchange. The temptation to overissue is strong, since the only expense of producing the money lies in the cost of paper and printing, and it is extremely difficult to estimate what amount is needed. Trade fluctuates, and with it the demand for money, so that even if the paper originally issued was no more than sufficient to meet current requirements, it will become excessive when trade falls off. If the Government that issued it is not very stable, there is additional obstacle to its circulation, and its purchasing power may fluctuate with the fortunes of the Government, as the greenbacks did with the fortunes of the Federal Army in the Civil War. It is an inelastic currency, since the supply of it, though easily extended, is not easily reduced when trade falls off; in this respect it differs from bank credits, which are to be explained later. Once it depreciates, it begins to drive all good money out of the country, in accordance with Gresham's Law.

Examples. — History affords plenty of examples of the evils of an inconvertible paper currency money. The notes of the French Revolutionary Government called *assignats*, issued on what seemed excellent security, namely the land confiscated from the Church, depreciated in comparison with metallic money, because the holders of the notes could never get hold of the land the notes were supposed to represent, and at one time 200 francs in assignats were needed to purchase the same amount of anything as one silver franc. English Bank of England notes between 1797 and 1819 were inconvertible, *i.e.* could not be exchanged for gold on demand, and depreciated 15 per cent. The greenbacks issued by the United States Government to the extent of 450 million dollars depreciated at one time 65 per cent, as compared with the gold dollar. Such money is no use for foreign payments. Its great evil, however, is the uncertainty it introduces into business. It neither possesses intrinsic utility nor represents anything possessing intrinsic utility; its purchasing power, therefore, fluctuates with every change in trade, and no one knows *what* exactly he is being offered when he is offered payment in it. The overissue of it by a Government is mere robbery, equivalent to the payment of a debt with a check that the payer knows will not be honored.

Bullion Certificates. — At the opposite extreme to inconvertible paper currency is the bullion certificate. To this class belong the United States gold and silver certificates, and, with the exception of about £20,000,000 issued against securities, Bank of England notes. They are paper documents issued merely to save the trouble of handling large amounts of metal; their convertibility, *i.e.* the power to exchange them on demand for gold, is secured by a 100 per cent reserve.

Credit Note. — A third type of paper money is the bank or Government "note." It is a promise or order to pay gold or other standard money on demand; it differs therefore from our first type of paper money in being convertible. Unlike the bullion certificate, however, its convertibility is not secured by the deposit in reserve of gold to the same amount as the issue of notes; a reserve of gold is kept, but not a 100 per cent reserve. The bank or government that issues notes knows from experience that not all the notes will ever be presented for cash payment at once; it maintains a cash reserve against them, therefore, sufficient only to pay cash for so many as are likely to be presented. These notes — they will be dealt with again in the next chapter as forms of credit — are a currency created in Europe chiefly by banks, in the United States by Government as well as banks. They have the quality of general acceptability, because, although they have themselves no intrinsic value, they are convertible, *i.e.* can be exchanged on demand for gold. They represent a great economy in the use of gold, since the gold reserve required as the basis for a note issue is only a fraction of the amount of the issue. This economy, however, introduces a risk which is not present in the case of bullion certificates; this risk is the simultaneous presentation for cash payment of an amount of notes greater than the cash reserve. If this happens, the bank must fail, even if it have other assets to more than the value of the demands upon it, since a presented note is a legal demand for *cash*, not for *any* kind of property. The same danger may be put in another way: the bank may not keep an adequate reserve, *i.e.* an amount of cash or bullion sufficient to meet the possible demand for cash. The bank has sufficient motive to keep its reserve adequate, in the obligation which it is under to pay cash on demand for its notes; but the profit made by increasing the note issue without increasing the reserve is a motive tending to action in the opposite direction.

Checks. — In England any additional issue of bank notes was stopped by the Bank Act of 1844, and the check has taken the place of the note as the chief form of currency. A check is an order on a bank by some one who has a credit with the bank to pay cash to the person mentioned in the order. Its acceptability is secured by the same means as that of the note, namely by its convertibility; and its convertibility is secured similarly by the bank's cash reserve. The check has several advantages over the note. It enables a payment involving fractions of a dollar to be made without the use of small change; only amounts which are multiples of one dollar can be paid by note. A check if drawn to order not bearer, must be indorsed by the payee, and the indorsement is a receipt of payment. In England they have the system of "crossed" checks under which, if the check be crossed (that is if two parallel lines be drawn across the face of the check), the bank on which it is drawn will pay the cash, which the check orders them to pay, into a banking account only; thus the payer has a check on the movement of his payment, and can transmit it by post without fear of its being misappropriated. Finally, every check goes through the signatory's bank, and the bank keeps account of all checks; hence the signatory's payment account is automatically kept for him: by passing his receipts as well as his payments through his banking account, he can have all his accounts kept for him. The check, however, does not circulate quite so freely as the note; its acceptability is not so general. This is due to the fact that its value depends on the solvency of the signatory to it, while a note has the credit of a well-known bank behind it. Also the payer of a check cannot pass on a better title to it than he has himself; if A steals a check and uses it to pay a debt he owes B, the amount of the check can be recovered from B on discovery of the theft, while if A steals a bank note and pays it to B who receives it in good faith and spends it again, the owner of the note cannot recover from B. In spite of these slight drawbacks the use of the check is growing more rapidly than that of any other medium of exchange.

Bills of Exchange. — The only other substitute for metallic money that is of importance is the draft or bill of exchange. A bill of exchange is difficult to distinguish from a check, but usually looks to the future and may be drawn not on a bank but on a merchant. Its typical form is:

$5000

New York,
To White, Jones and Co. *March* 1, 1918.

Three months after date pay to the Victor Manufacturing Co., or order, the sum of five thousand dollars, for value received.

(Signed) Victor Manufacturing Company.
J. M. Bell, President.

In this example, the Victor Manufacturing Co. are said to "draw on" White, Jones & Co. The Victor Manufacturing Co. will draw up the form and send it to White, Jones & Co. If the latter admit their liability, they will "accept" it, *i.e.* write across it "accepted, White, Jones & Co."; they thereby make themselves liable to pay cash to the amount of $5000 on June 1, 1918. The Victor Manufacturing Co. can then either wait till the full three months have elapsed and then collect payment, or they can take it to a bank or bill-broker, who will "discount" it, *i. e.* give them cash for it, less interest for three months; or they can use it to pay a debt to some other creditor. In either of the last two cases they will have to indorse the bill, thus making themselves liable to pay it when due, if the firm on which it is drawn is unable to meet its liability. A bill of exchange may be used to settle a dozen debts and travel half round the world; each firm that uses it to pay a debt will indorse it, making itself liable to meet it when it falls due, if none of the firms whose names appear earlier on it is able to do so. The phrase "for value received" should be noticed. Usually it is true; the bill is a payment for goods which have been sent by the drawer to the drawee, and the bill is almost equivalent to an invoice. Sometimes, however, the phrase is a mere form; the bill is then a device for making a loan, and is known as a Finance Bill or Accommodation Bill.

CHAPTER X

BANKING AND CREDIT

I

The Canceling of Indebtedness by the Use of Credit-Instruments

Economy of Paper Substitutes. — We have seen that the use of money is a device to facilitate exchange. We have seen that the one quality essential in money is acceptability, and that the easiest way to give money that essential quality is to use as money a commodity acceptable and valued on account of its intrinsic properties. United States gold coin is money of this kind, " and is acceptable everywhere, because its value depends not on the government stamp upon it, but on its material. The use of such money to the exclusion of all other kinds is, however, impracticable, the amount and frequency of commercial exchanges being too great for them all to take place through the medium of gold. Consequently certain paper substitutes for cash have come into use, which save society the labor which would be required to extract from the earth a store of gold large enough to serve as the medium for all exchanges. Cash is expensive to society; all the kinds of paper money we have examined economize cash. We have now to proceed beyond a bare description of them, and inquire *how* they effect this economy of cash.

Basis of Value. — It should be noticed first of all how the essential quality of acceptability is secured for paper money.

In the case of inconvertible paper money issued by a government, or with the authority of a government, acceptability is secured by law; by law the paper is legal tender, the offer of it must be accepted as full settlement of debts. This method is unsatisfactory, since, as we have seen, this method cannot be relied on to secure for the paper acceptability *at par*, *i.e.* acceptability at its nominal value measured in gold. In the case of all other kinds of paper money the quality of acceptability is secured by making them "convertible," *i.e.* exchangeable for gold. Bank-notes, checks, and bills of exchange are not gold, but they are all promises to pay gold; they give their holder a claim to gold, and on the whole, therefore, enjoy the same acceptability as gold itself.

Cancellation. — Now if sellers who had received payment for their goods in these paper claims invariably demanded the gold which these papers entitled them to claim, there would be no economy of gold; payments would be deferred, but would still be gold payments. The reason why these credit instruments economize gold is that they are not as a rule presented for payment in this way; they are transferred from one person to another until *the claims which a man creates against himself by buying and the claims which he acquires over others by selling are brought together and canceled*, the difference only, and usually not even that, being paid in gold.

Methods of Cancellation. — This canceling may be effected in any of several ways. Suppose Adams, a farmer, sells all his butter to the village storekeeper, Brown, and also buys *from* Brown all his groceries. Brown will not hand cash over to Adams every time he receives a consignment of butter, he will instead make a note of the value received; and Adams will not pay Brown cash every time he takes from the store a pound of tea, instead he will tell Brown to put it down in the account. Once a month or once a quarter, a balance will be struck; Brown will find, perhaps, that he has received $125's worth of butter and sold $100's worth of groceries ; he will *cancel* the $100 of his claim on Adams against $100 of Adams' claim on him, and need hand over in actual cash only the balance, $25.

Suppose again that the farmer Adams instead of selling his butter to Brown, from whom he got his groceries, sold it to a produce dealer, Clark, who was Brown's landlord; then there might be a similar elimination of cash-dealings by the canceling of debts. Adams owes Brown $100 for groceries, Brown owes Clark $100 for rent, and Clark owes Adams $125 for butter. Adams instead of giving Brown $100 gives him a promissory note of some kind for the amount, intending to meet the note when Clark has paid him for his butter; Brown induces Clark to accept the note in settlement of his rent, and Clark hands it over with $25 to Adams in payment for the butter. Thus exchanges to the amount of $325 will have taken place and only $25 have been transferred.

Cases as simple as this are not likely to occur often; but the case illustrates the possibility of economizing gold by a system of canceling the debts which a man incurs by buying against the claims he acquires by selling. The difficulties in the way of a general use of this simple system of carrying on exchange are three: Adams' business may be perfectly solvent and yet his name be unknown. In that case, bills or drafts drawn on him will not have the quality of acceptability once they get outside the immediate circle of his acquaintances. Secondly, Adams' creditor may have perfect faith in Adams' ultimate solvency, and yet doubt his ability to produce at a moment's notice the *cash* which the note is a promise to pay. If he is likely to want cash himself, therefore, he will refuse Adams' note (politely, one hopes) and insist on currency. The third difficulty is this: modern commerce is extremely complicated, specialization is carried so far that every business man has relations with great numbers of sellers or buyers; it is extremely unlikely, therefore, that the note which Adams successfully launched in payment of his grocer's bill will find its way back to him in settlement of a claim he has on one of his customers.

The Bank Account. — The banking system overcomes these difficulties. By an arrangement with the bank the business man who does not wish to pay gold substitutes a draft on the bank (or check) for a draft on himself. This will have the acceptability which his draft on himself lacked, firstly, because banks are comparatively few in number and their names well known over wide areas, secondly, because banks undertake to pay *cash* if cash is wanted. The bank overcomes also the third obstacle to the canceling of indebtedness, the obstacle offered by the wide extension and complexity of modern commerce. The arrangement which the business man has with the bank is an "account." This account gives him the right to draw on the bank for cash to the amount of the account; in other words, it is a claim to cash which the bank will recognize and which he can transfer. Now Adams, Brown, and Clark in our imaginary instance would all have banking accounts. Adams, therefore, would pay his quarterly grocery bill to Brown not with a draft on himself but with a check. Now, a check is an order on the bank to pay gold, but the receiver of a check rarely exercises his right to demand gold, being content to pay the check into his own banking account. Brown, therefore, would pay Adams' check into his account, and the bank would credit his account with an additional $100, at the same time deducting $100 from the amount standing in its books to Adams' credit. Similarly Brown would pay Clark with a check, and Clark would pay Adams with a check, the receiver in each case paying the check into his account. Thus Adams' banking account would be increased by the amount of his sale of butter, $125, and decreased by the amount of his purchase of groceries, $100; Brown's banking account would be increased by the amount of his sale of groceries and decreased by the amount of his rent; Clark's account would be increased by the payment he receives from his tenant and decreased by the amount of his purchases of butter. Each has paid for his purchases, not with gold nor with a claim on himself, but by transferring a portion of the claim on the bank which his account gives him; each is paid for his sales in the same way. Thus *at the bank* the claims which each acquires over others by his sales and the claims which each gives others on himself by his purchases are brought together, canceled so far as they balance each other, and the difference credited or debited to the account of each; in our instance, at the close of the series of exchanges, Adams' banking account will be $25 higher than it was at the start, Clark's $25 less, Brown's as it was.

Inter-Bank Relations. — It may happen, however, that there are two banks in the village, and that Adams has his banking account at a different bank from the other two; we will call Adams' bank the First National and the other the State Bank. Adams will then pay Brown with a check on the First National which Brown will pay into his account at the State Bank; this check will give the State Bank a claim for $100 on the First National, since it is an order on the First National to pay Brown *or his representative* $100. Clark, on the other hand, will pay Adams with a check on the State Bank, which Adams will place to his account at the First National; this check gives the First National a claim to $100 from the State Bank, and it is merely necessary for the representatives of the two banks to meet for these contrary claims to be set against each other and the balance, $25, paid by the State Bank to the First National. The principle is exactly the same as in the previous case; payment is made by the purchasers *transferring* to the sellers claims on their banks, and the banks, being in touch with one another, can bring opposing claims together and cancel them. Even if the two banks are in different districts, the same result will be brought about. While we have in the United States more than 25,000 independent banks and trust companies, all are connected, through membership in the Federal Reserve system or through correspondents in New York, in a gigantic clearing system. Checks on member banks in the same federal reserve district are cleared through the reserve bank of the district. If they are drawn on member banks outside the district or on non-member banks that have joined the reserve system's "country-wide" check collection organization, they are cleared through the gold settlement fund at Washington established to handle the items arising between the reserve banks themselves. When checks are drawn on non-member banks not enrolled in the reserve system's clearing organization, the balancing of the reciprocal claims arising between different communities is effected through the remittance of drafts on New York or on other large centers where transfers are made from one account to another on the banks of the correspondent banks. Currency shipments are only occasionally necessary to replenish or to draw down balances.

Through the complex and far-reaching banking system the claims to cash which a man is constantly acquiring by selling his goods or his labor can be brought together and balanced against the claims which others are constantly acquiring on him by selling to him goods or services, so that he needs cash only for purposes of retail transactions. The banking system is a great clearing-house, in which sales and purchases are registered and thus canceled against each other. Banking systems, however, are national, not international; there remains for consideration the case of international exchanges. These are effected chiefly through the medium of the bill of exchange. The note which we imagined the farmer Adams giving to his creditor Brown was, in effect if not in form, a bill of exchange; it was an undertaking to pay cash for value received at some future date. Brown used it to pay Clark, and Clark to pay Adams. Between the date when a bill is drawn and settles the first debt, and the date when it falls due and is presented for cash-payment, it may be used a score of times to settle a score of debts, perhaps in half a dozen different countries.

Bills of Exchange as Instruments of Cancellation. — Bills of exchange are used in internal trade, but they arose in international trade and are the most usual method of making foreign payments. Suppose that an American merchant is buying English cloth to the value of $500 at the same time as a London merchant is buying American wheat to the value of $500. It would be a great waste of trouble if the American merchant shipped $500 across the Atlantic to pay the English manufacturer, and at the same time the English corn-merchant shipped $500 to pay the American wheat-exporter. That trouble is saved by the American wheat-exporter drawing a sterling bill on the English corn-merchant and selling the bill for dollars at the current buying rate for sterling quoted by his banker. The English corn-merchant accepts the bill, paying it at maturity. On the other hand, the American cloth importer purchases from his banker a sterling draft drawn on the banker's London correspondent. This draft is mailed to the English exporter, who deposits it and has it credited to his account. Thus through the medium of bills of exchange the English manufacturer's claim on the American cloth importer is exchanged for a claim on a London grain dealer, and the American exporter's claim on the London grain dealer is exchanged for a claim on an American cloth importer; both collect payment *at home*, and no cash crosses the Atlantic. In practice the American exporter will not draw on the English grain dealer, but on some financial house that makes a business of creating bills. The English grain dealer may be quite solvent and yet his name be unknown; a bill drawn on him might be a good bill and yet be unacceptable simply because he was not well known, so that the American exporter when he got the bill would be unable to use it; the primary essential of currency is acceptability, and his bill would lack that quality. The difficulty is got over by the English grain dealer making an arrangement with a financial house; they know him, and they themselves are known everywhere; a bill on them will be acceptable, because they are known. The American exporter, therefore, draws on them, the English grain dealer giving them security against loss and paying them for the use of their name. The principle of the transaction is the same as in payment by check. The purchaser who pays with a check *transfers his claim* on a bank to his creditor; the purchaser who pays with a bill on a discount merchant, *transfers the claim* on this discount merchant which he has acquired by giving him security and paying for the use of his name. In England financial houses that create bills of exchange are frequently firms originally engaged in general merchandising, who found that their reputation was so good that they could literally "trade upon it" by selling bills of exchange drawn upon them.

The net result of the use of checks and bills of exchange is *to substitute an institution* — the Money Market, which includes banks, discount merchants, and bill-brokers — *for a commodity* — gold — as the medium of exchange. If I have textiles for sale and I want grain, I do not exchange my textiles for gold and the gold for grain; I exchange the textiles for a claim on a bank, and the claim on the bank for grain; gold is eliminated as the medium of exchange (though it remains the standard of value), and the institution comes in. The man to whom I give my textiles says the bank will pay me. He transfers his claim on the bank to me, and I tell the man from whom I get the corn that my bank will pay him. I transfer my claim on the bank to him. *If everybody always used this method of negotiating exchanges, there need be no gold;* all purchases and all sales would be registered in some bank, so that a man's sales could always be set against his purchases. But *somebody always and everybody sometimes* wants the gold or currency, to which the check, note, or bill gives a claim. Hence banks have to keep a reserve of gold, and gold remains the basis of all exchange.

II

The Creation of Credit by Banks

The Functioning of the Bank Account. — We have seen that most payments in wholesale commerce to-day are made not in gold but in promises to pay gold or in credit instruments that constitute a claim to gold. The man who sells goods receives a check or bill which gives him a claim to gold; the man who buys goods pays with a check or bill which represents a claim to gold. We have seen that in the banking system all claims of this nature are brought together, all sales and purchases are, as it were, registered, so that the claims against a man (on account of his purchases) may be set against the claims he has on others (on account of his sales), and the *balance only* paid to him or collected from him. For a claim on himself the purchaser by arrangement substitutes a claim on his bank or some well-known financial house, *i.e.* he pays with a draft, not on himself but on the bank (a check) or on the financial house (a bill of exchange). He is paid with similar checks and bills, most of which he pays into his banking account. Thus, in his banking account the claims which his sales give him against others are set against the claims which his purchases give others against him.

Methods of Obtaining Accounts. — This "arrangement," by which the purchaser is able to give a draft on a bank instead of allowing his creditor to draw on him, is called a "banking account." An account may be created, either by the client paying in something to the bank or by the bank making an advance to the client. In the first case the client places in the bank's keeping a portion of his wealth, which the bank is at liberty to use as it thinks fit, so long as it can return his wealth on demand or due notice; in return for the use of his wealth the bank will either pay him interest or transact his banking business for him without making any charge for the service. In the second case, in return for the payment of interest, the bank treats a client, who has *not* given the bank his wealth to use, in exactly the same way as it treats a client who has. What the banker in effect says to his client is, "Give me security and pay me interest, and I will pay your debts for you in precisely the same way as I do those of a client who has placed in my keeping a portion of his wealth for that purpose." The client to whom a credit is allowed by a bank has to give some sort of security for repayment; but this security differs from the deposit against which the holder of a deposit account can draw checks, inasmuch as the bank cannot use it in any way except as security. If, for example, I deposit five hundred dollars with a bank, the bank can immediately lend them to somebody else; if I receive a credit of $500 and give as security my life-insurance policy, the bank can do nothing with that, so long as I satisfy the conditions on which the credit was granted. But whether a bank's client has acquired the right to draw checks on the bank by depositing wealth with the bank or by receiving an advance from it, he has that right; the bank undertakes to honor checks signed by him, *i.e.* to pay cash for them if asked to do so. An account which gives this right to draw checks, however acquired, is a "Demand deposit." Banks will also receive money on deposit and pay interest on it, on condition that it is not withdrawn without the giving of some days' notice; an arrangement of this kind is a "Time deposit."

The Clearing House. — Suppose a bank has made an advance of this kind; the bank's client will wish to use the advance, and will use it by drawing checks to the amount of the advance to pay his creditors. Now his creditors in nine cases out of ten will not cash these checks, but will pay them into their banking accounts *as deposits;* thus the advance made by one bank becomes a deposit in another bank, or, it may be, in the same bank. If the creditor to whom the bank's client pays the checks which he draws against his advance has an account with the same bank, the bank has merely to make two entries in its books, deducting the amount of the check from one account and placing it to the other; if the checks are paid into some other bank, they will be set against checks drawn on this other bank and paid into the first bank, when the representatives of the two banks meet in the Clearing-House. Thus while deposits or advances are distinct from the point of view of the individual client or bank, from the point of view of the banking system as a whole deposits and advances are largely identical.

Credit Extension. — We can see now how banks are able to "manufacture credit," we might almost say "manufacture money." At first they accepted deposits of gold and loaned them out again, acting merely as middlemen between those who had and those who wanted cash. Now they accept deposits which they loan out again, and *in addition make advances which have no deposits against them*, by creating claims on themselves which their clients can transfer in payment for their purchases. The bank makes an advance to a client of $5000; this means that it undertakes to meet the claims for gold on its client to the amount of $5000; it has increased its liabilities by $5000, and this will appear in its balance sheet in the form of an additional $5000 added to its Demand and Time Deposits, while there is a corresponding increase in its assets appearing in the balance sheet in the form of $5000 added to its Loans and Discounts.

When a bank makes an advance of $5000 a mutual liability is created between the bank and its client; the bank incurs a liability to find $5000 in cash if called on, and the client incurs a liability to repay the bank $5000 when called on. The bank can incur this liability only because it is never called on to meet it in full; the clients to whom it makes advances draw checks against those advances to pay their debts, but the checks are never *all* presented for cash payment; most of them always are paid into other banks as deposits and are canceled against checks on these other banks, which are paid into the first bank as deposits. A bank can safely make advances because those advances will most of them become deposits in other banks, just as its own deposits consist largely of claims on other banks which have made advances to their clients.

III

The Cash Reserve

Function of Reserve. — Are there any limits to this power that banks have of " manufacturing credit," and so increasing the amount of currency? It is obviously profitable to them, since their clients pay them interest on these check credits in precisely the same way as they would if the loan consisted of other clients' deposits, on which the bank was paying interest itself. There are limits. The extreme theoretical limit is the amount of security which the clients have to offer for advances; since, however, banks will sometimes make an advance simply on the security of a client's good name, this extreme limit is vague and practically unimportant. The real limit is imposed by the need of keeping a *cash reserve* against the liabilities involved in all accounts, *credit as well as deposit accounts*. Any one with an account at the bank can draw checks, and a check is an order on the

bank *to pay gold* (or other forms of money equivalent to gold), which the bank undertakes to honor. Usually a check drawn on one bank is paid into another bank and simply canceled with a check drawn on the second bank and deposited with the first. If people were *always* content to trust the bank, and to make and receive *all* payments by check, then banks need keep no cash reserve. But everybody at some time needs cash. The demand for cash, or, to put the same thing in another way, the extent to which people will be satisfied with payment by check or other credit instruments, varies, so that the cash reserve which a bank needs varies also; but an *adequate* cash reserve the bank must keep. A check is an order to pay cash. A glance at a bank's balance-sheet will show that a small proportion only of its assets are cash, yet none of the other assets will serve instead of cash, if there is anything in the nature of a " run " on the bank; checks cannot be met by the offer of investments, the securities held against advances, bank buildings, or any of the other assets, and in such a time it may be impossible to call in loans or to realize any of the assets, except at a heavy loss. It is essential, therefore, that a bank keep a cash reserve adequate to meet all the demands for cash that will be made by clients who have deposits with or advances from the bank; it is almost as essential that the bank keep its assets " liquid," *i.e.* invest its resources in such a way that they are not " locked up " and can be converted into cash at short notice.

Conflict of Motives in Reserve Management. — Here is the banker's dilemma. By keeping a large cash reserve in proportion to his liabilities, he will secure safety; but he will reduce his profits, since the cash reserve earns him no interest, and he may embarrass his clients, who rely on him for advances and may be seriously inconvenienced, perhaps even driven into bankruptcy, if he contracts his credits in order to strengthen his reserve. If, on the other hand, he keep a small reserve, freely giving his clients the advances they ask for and increasing his profits by reducing the proportion of his assets lying idle, then he will be jeopardizing security; in case of a collapse of confidence in the business world, he will be unable to meet the demands for cash made upon him, and may involve in his ruin many of his clients who had relied on him to supply them with cash.

Regulating Reserves. — It is not the *amount* of the cash reserve that is the important thing in banking, but the *proportion* of cash reserve to liabilities, *i.e.* to outstanding notes and deposits; it would be a futile precaution to fix the *amount* either of reserve or of advances. And the proportion which the reserve must bear to the liabilities is not fixed; it varies with the state of confidence in the money market and the needs of business. A credit system is a system based on trust; when business men have no reason to distrust one another's ability to pay cash, they will not insist on cash and will be content with promises to pay cash, *i.e.* credit instruments; when they have reason to be distrustful, they will want cash. When credit is good, " credits " may be increased; when credit is bad, " credits " must be reduced — in other words, the proportion which the cash reserve bears to the liabilities to find cash must be increased.

United States. — In the United States reliance has long been placed on legally prescribed reserves. Before the organization of the Federal reserve system the prescribed reserves were criticized because they were rigid, that is to say the law required their maintenance irrespective of circumstances. In the formulation of the Federal reserve system, however, the attempt was made to make credit responsive as well as secure.

The cash reserves of the American banking system are variously prescribed for the different classes of banks and for the two forms of bank credit, namely, deposits and bank notes. The Federal reserve banks, of which there are twelve, are required to maintain a 35 per cent reserve in gold and lawful money against their deposit liabilities which are mainly banker's balances regarded by the bankers themselves as the equivalent of cash in their own vaults. All banks members of the Federal reserve system are required to keep reserves of 13 per cent, 10 per cent, or 7 per cent according as they are situated in central reserve cities, reserve cities, or in smaller places. On the other hand the reserve requirements for bank notes vary. National bank notes and federal reserve bank notes which are based upon government bonds have behind them no special cash reserve beyond a 5 per cent specie reserve deposited as a special redemption fund with the government. Federal reserve notes, based on commercial paper acquired by the Federal reserve banks, are required to have a forty per cent reserve in gold. Under the Federal law, however, the Federal Reserve Board is authorized under adequate safeguards to suspend reserve requirements for a period of thirty days and to renew the suspension for periods of fifteen days. The power thus accorded to the Board lifts the charge of rigidity formally leveled at the national reserve requirements.

Banks organized under the laws of the several states are subjected to various reserve requirements. State laws vary not only with respect to percentages, but also with respect to location and composition. Note issue by State banks, while legal in a good many cases in so far as charter rights are concerned, are rendered practically impossible through a federal 10 per cent tax.

England. — English banks keep no fixed proportion of cash reserve to liabilities, and seldom keep a 25 per cent reserve; but by strengthening their reserve in anticipation of any unusual call for gold they have been able for over a generation, except during the crisis precipitated by the Great War, to meet all demands on them. The cash reserve of the English banking system as a whole is probably smaller, in proportion to liabilities to find cash, than is the case in any other country, and the reserve is concentrated at a single point in a way that is not found elsewhere. The other banks keep the greater part of their reserves in the form of a deposit with the Bank of England. They do this (although the bank pays no interest on such deposits) partly because the Bank of England has facilities which the other banks lack for safeguarding large amounts of bullion, partly in order that they may be able to pay one another clearing-house balances in checks on the Bank of England. Now the Bank itself, in addition to acting thus as the banker's bank, does an ordinary banking business, and therefore loans out its deposits to customers, discounts bills of exchange, and makes advances on other security, keeping only a proportion of its assets in cash or bullion. It keeps a much bigger cash reserve in proportion to its liabilities than any other bank; still the other banks treat their deposits with the Bank as equivalent to cash, so that the reserve which the banks state that they are keeping against their liabilities is not altogether a *cash* reserve: the Bank of England's own banking transactions reduce still further the amount of actual cash kept as a reserve against the liability of *all* banks to pay cash, if called on, to the amount of their current and deposit accounts.

The law has permitted yet a further deduction; the Bank Charter Act of 1844, while forbidding the issue of notes additional to the notes already in circulation except against an equivalent deposit of coin or bullion, permitted the Bank to issue £14,000,000 against securities.[1] The Bank is in two departments, a Banking Department and a Note Issue Department; the Banking Department places all gold that

comes to it in the Note Issue Department, taking out notes in exchange. Thus the "cash" reserve of the Banking Department is a reserve of notes, and of these notes some twenty millions are issued against securities, not against gold. The credit system of England is like a pyramid, the apex of which is the gold reserve; but the pyramid rests not on its base, but on its apex, and the balance of it depends on the judgment of the managers and directors of the banks that compose it, above all on the judgment of the directors of the Bank of England.

English bankers are not required by law to maintain any definite proportion between their cash reserve and their liabilities. This system is defended, as against the system of a legal minimum, on the grounds that it is both more economical and safer; more economical because it permits a reduction in the cash reserve lying idle, when the temper of the money market is confident; safer, because it throws on the banker the full responsibility of maintaining an adequate reserve, so that he will be constantly anticipating changes in the market with a view to strengthening his reserve *before* the need comes, instead of relying on a statutory 20 per cent or 25 per cent reserve. This constant anticipation of the demand for cash, and variation of the reserve in accordance with it, is the most important part of the banker's work, and controls English banking policy. In England a banker is expected to keep his assets liquid, in order to protect his reserve.

A distinguished banker once said that the art of banking lay in being able to distinguish between a Bill of Exchange and a Mortgage, because a Bill of Exchange is the chief example of a liquid asset, while a Mortgage locks up one's money for a long term of years. A bank's assets, as stated in a balance-sheet, illustrate this principle. First comes "Cash in vault or on deposit with Federal Reserve Bank," essential to the banker's work because needed to meet demands for cash, but a comparatively small proportion of the whole because earning the bank no interest. Next "Demand" or "Call Loans"; these are advances to brokers and speculators, at a low rate of interest in consideration of the fact that the bank can insist on repayment on demand. Next, the most important item, "Loans and discounts." The loans are made on some security and, being made for a definite term, take the bank's assets out of its control only for that term. Discounts are really only a special kind of "loan." A client of the bank, having sold goods to a customer in another country, has been paid with a bill due, say, in three months; he wants the money at once, and goes to the bank, which takes the bill from him at its face value less three months' interest or discount. The transaction is really a loan on the security of the bill, since the client will have to indorse the bill, thus making himself liable to meet it when it becomes due, if the person on whom it is drawn does not do so; at the same time it is just the kind of investment the bank wants, since it is secure — the goods should have reached the foreign customer, been sold, and provided him with the money to meet the bill by the time the three months have elapsed — and it ties the bank for three months only. Next come "Stocks and Bonds," earning for the bank a good rate of interest, but a comparatively small proportion of the whole assets because they are of little use in times of stringency for strengthening the reserve. Last come "Banking House and Fixtures," a small item.

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[1] This amount has since been increased to £18,450,000 by the provision in the Act that when a bank with the right to issue notes lost that right by amalgamation with a London bank, or any other cause, the Bank of England might increase its note issue against securities by two thirds of the amount of the lapsed issue.

Strengthening Reserves. — The method by which a bank *protects its reserve* will be clear from this consideration of its assets. The banker will watch all the signs of the market, and, if he anticipates a demand for cash, will restrict his loans and discount fewer bills. Meanwhile loans made previously will come to the end of their term and bills held by the bank will fall due, so that the banker will be acquiring "claims to cash" to set against the claims which the bank's depositors have on the bank, and thus the proportion which the cash reserve bears to the outstanding liabilities is increased. The restriction of credit must not be done suddenly; so many businesses are dependent on advances from banks that a sudden withdrawal of these advances by the banks would precipitate many into bankruptcy and perhaps produce a financial crisis. The device by which a gradual and safe restriction is effected is the raising of the rate of interest charged for loans and the rate of discount charged on bills. By this device those who can possibly do without the bank's assistance will do so to avoid the expense of the higher rate of interest, while those who must have the assistance will be able to get it by paying for it.

Under the Federal Reserve System a member bank, unable because of inadequate reserves to extend further credit, can by rediscounting acceptable commercial paper or by offering prescribed collateral with its own note obtain advances from its reserve bank. These advances are added to the member bank's balance and permit it to extend such further credit as circumstances require. A general resort to the reserve banks for advances of this kind enables the reserve banks to control the discount and interest rates that the member banks themselves quote on the theory that no member bank will quote a rate lower than it itself has to pay at the reserve bank. In England and on the continent of Europe the big central banks hold large balances for the bankers and these central banks make advances to the other banks for further loan and discount operations. Responsibility for protecting the home reserves thus devolves upon these central banks.

IV

The Social Utility of the Credit System

There remains for consideration the broad question of the social utility of this banking and credit system which we have been studying. How does it aid production? Is it essential to the modern organization of industry or (as some think) a useless and dangerous excrescence, maintained merely because so many people are interested in its profits? Briefly it may be said that the system is essential and fundamental. The principle underlying the whole of modern industry is the productiveness of specialization. Specialization, we have seen, involves exchange and production in anticipation of demand. The credit system *facilitates exchange* and *finances production in anticipation of demand.*

Influence on Exchange. — It facilitates exchange. Direct exchange or barter is clumsy. The use of a commodity, in the form of coin, as a medium of exchange is clumsy; imagine the amount of gold and silver that would be needed if all modern commerce were carried on on a basis of specie payments! The credit system enables us to substitute an order on a bank or a bill of exchange, *a promise to pay cash,* for cash itself, and then bring these promises together and cancel them. It is a sort of clearing-house, in which a man's debts and claims are brought together and set against each other. A reserve of gold is still needed, but only a reserve. For the commodity, gold, we have substituted as our medium of exchange the institution, the bank. This is the earliest function of the credit system; the bill of exchange arose centuries before the bank-note, to obviate the necessity of shipping bullion to pay for imports; and early banks, like the Bank of Amsterdam described by Adam Smith, were established to supply, not credit, but a satisfactory medium of exchange.

Influence on Production. — The credit system finances production in anticipation of demand. We have seen how specialization necessitates production in anticipation of demand; it makes the process of production so lengthy and roundabout that it has to be commenced months and perhaps years before the product will be wanted. Payment, however, is not made by the consumer until he receives the finished product. When I pay $2.50 for a flannel shirt, I receive a finished commodity which the retailer stocked perhaps a month ago, the wholesaler perhaps three months ago; the flannel of which it is made was manufactured nine months ago out of yarn spun twelve months ago, and the wool was grown two years ago; buildings and machinery were required to carry through the different processes of manufacture, coal to drive the machinery, and means of transport to convey the material from one stage of production to the next. Scores of firms *have incurred expenditure* months and years before I pay $2.50, in order that the shirt may be ready. All relied on the ultimate sale of the shirt to reimburse them for their expenditure, but the expenditure had to be incurred first. The question is, how was this expenditure met? The woolen shirt is only one transaction among millions, on all of which expenditure had to be incurred before payment could be obtained.

Releasing Funds Tied Up. — The first source from which such expenditure is met is current income from shirts already sold. The $2.50 I paid for a shirt two years ago may have just percolated to the farmer whose wool is in my new shirt; the payment a farmer receives for last year's clip should normally meet the expenses of this year's. But many firms cannot afford to wait for payment, and all firms at starting and at other times have to face periods during which there are no incomings to balance outgoings, since their products are either incomplete or cannot find a market at the moment.

Anticipating Funds. — The second source is savings. Each person in the series has something in hand when he starts in business, with which to buy plant and materials, and to meet expenses until the products of the business begin to bring in an income. This is the chief resource; without it specialization to the extent that it is found in modern industry could not be adopted. But it does not afford a complete answer to our problem, because its usefulness is limited by its amount and the number of times it can be turned over. For example, a retailer having bought stock would be bound to sell out *that* stock before he could get any new stock — even though he might find that something quite different was in demand. A manufacturer, having bought yarn and woven flannel from it, would have to sell and *get paid for* the flannel, before he could buy any more yarn to continue manufacturing. In these cases the difficulty might be overcome by the producer spreading his working capital over a large number of operations, so that some payments would always be coming in; but the farmer could not do this. The farmer gets the greater part of his income at one period of the year, when he sells the clip; if for any reason, such as drought, he be forced to incur unusual expenses, and cash dealings were the only method of payment, he would go bankrupt, although he might have wool and mutton growing sufficient to meet all his expenses. Similarly a hop-farmer might have all his working capital tied up in a promising crop; the crop is attacked by a blight, but can be saved if he can go to the expense of washing it; if the two resources we have dealt with so far were the only resources available, he could not save it. And all businesses, commercial and industrial as well as farming, would be unable — without credit in some form or other — to extend their operations to meet a growing demand, except by the slow process of saving. The flannel manufacturer, for example, might be absolutely certain that he could sell double the quantity he sold last year and yet be unable to make more than last year — *unless*

he can raise money now on the value of his next year's output, and with it buy additional yarn, plant, labor, etc.

This is what the credit system enables him to do. The credit system affords, in addition to income and savings, a third and most elastic resource from which the expenditure incurred in producing ahead of demand can be met. Credit is the exchange of "present" goods for "future" goods. On the assurance that you will be able to pay when your product is completed and sold, you can borrow *now* the wherewithal to purchase goods now. Notes, bills of exchange, and bank credit are the means by which you are enabled to do this. The farmer, needing machinery to harvest his crop, pays for the machinery with credit obtained at his bank; when the wheat is harvested with the aid of the machinery, this advance will be liquidated. The bank loan tides over the interval between the use of the machinery and production of the crop. The crop, when harvested, will be worth more than enough to pay for the machinery and meet all other expenses; but the machinery is needed to harvest the crop. The farmer, therefore, buys the machinery with a promise secured on the crop, *i.e.* exchanges the "future" crop for the "present" machinery. The machinery maker may carry the farmer on "open account." In that event he is likely to discount his own note at the bank. Or again the farmer may give the machine maker a promissory note which the machine maker indorses and discounts. In either case the bank making the discount is really meeting for the farmer, until his crop is harvested, the claim against him which his purchase of machinery has created.

Discounting. — Or suppose the wheat is grown and harvested; an English importer buys it and gives his acceptance of a bill payable in three months. He cannot pay cash for the wheat until he has sold it himself, and he cannot sell it until it has reached England, all of which takes time; but he cannot get it to England, where it is wanted, without giving the farmer something — because the farmer wants to get on with his farming, or may have to meet a note which he gave in payment for machinery; so he gives the farmer a promise to pay in three months (by which time he will have got the grain to England and sold it); the farmer discounts the bill, *i.e.* a bank takes it from him and undertakes to meet all claims on him for cash to the amount of the bill (less discount); the bank can wait until the three months have elapsed, because it has a cash reserve sufficient to meet any claims for actual cash, and can rely on being able to cancel any checks drawn on it by the farmer against checks drawn on other banks and deposited with it.

The bill of exchange, which the bank will take, giving to the holder in exchange an account subject to his checks, is the chief means by which international commerce is carried on; the term of the bill tides the importer over the interval between his purchase of the goods in the foreign country and the sale of them in his own. The same function is performed by the bank if, instead of discounting the bill received by the farmer in our last instance, it makes the grain-importer an advance. The importer uses the advance to pay for the grain, and repays it when he has sold the grain; the bank undertakes, this time as before, to meet all claims against the value of that grain between the time when it is grown in America and the time when it is sold in England. This grant of an advance by banks is the most usual method of financing production in anticipation of demand. Suppose our flannel manufacturer foresees a big demand for tennis flannels; he is already working up to the limit of his capital, but he is so sure that additional flannel can be sold that he wishes to increase his output. The only way he can do this is to go to the bank, convince them that his anticipations are correct and also give them security for repayment, and so get a loan from them with which to increase his production. He has borrowed on the assurance that with the loan he will be able to produce more, and the increased product will more than repay the loan; the additional materials, labor, etc., which he purchases with the loan are really paid for by, *i.e.* exchanged for, the additional flannel they produce. The banks, with their cash reserves and their system of canceling claims for cash against each other, can give loans or advances to increase production in the form of promises to pay cash or claims to cash without having to produce more than a small proportion of actual cash. In every case the bank enables the producer to realize *now* a portion of the *future* value of his product, and so enables him to produce that product.

Collateral Security. — The bank enables him to do this by taking on itself the responsibility for finding any *cash* that may be claimed from him between the time when he commences his part of the productive process and the time when he completes it; the bank can undertake this responsibility, while others cannot, because the bank is the institution through which purchases and receipts are brought together and canceled against each other, the bank's cash reserve being maintained to meet such demands as there are for actual cash. The *real security* on which a bank relies, when it makes the advance to a business man, is the additional product which the advance will enable him to put on the market; it requires him, as a rule, to give it other security, in case his undertaking prove a failure, but the nature of this other security is exactly indicated by its name, "collateral security," and it is always a great nuisance to a bank to have to sell the collateral security in order to secure repayment of an advance. Collateral security is like the pledge left with a pawnbroker for repayment of a loan; if we did not expect to be able to repay the loan, we should *sell* the pledge, not pawn it.

Summary. — Thus the credit system is needed to finance the production in anticipation of demand to which specialization leads; and its special function is to give elasticity to the productive organization in response to the constant fluctuation in demand. It also has the effect of neutralizing to a great extent the irregularity of nature; it enables the farmer to derive from his farm a regular income, month by month, instead of receiving his whole year's income in one gulp when the harvest comes in and is sold; it does so by enabling him to begin to draw on the value of his next harvest as soon as the growing of it has begun; financiers will accept bills for him because they rely on his harvest to enable him to meet the bills when due. Because the credit system facilitates exchange and assists production in anticipation of demand, it makes possible the extreme specialization which is the chief source of the material wealth of modern societies. It is therefore fundamental to modern industry, in the same way and to the same degree as are the means of transport; it developed as they developed, and, though its working is not so obvious as are bridges, embankments, and docks, it is as important.

CHAPTER XI

THE LEVEL OF PRICES AND FOREIGN EXCHANGES

I

The Measurement of Changes in the Level of Prices

Significance of the "Level of Prices." — A price is the amount of money for which a commodity exchanges in the market. Since most commodities are exchanged for money, money becomes the standard of value; instead of saying that a bicycle is worth thirty bushels of wheat, we say that the bicycle is worth $30 and wheat is worth $1 a bushel. If the price of a commodity rises, we take it as an indication that its value has risen, *i.e.* that we can get in exchange for it more of other commodities than we could before; if its price falls, we expect to get less of other commodities in exchange for it. Sometimes, however, we find that the price of a thing has gone up, and yet the thing will exchange for no more of other commodities than it would before, because the prices of most other commodities have gone up at the same time; the price of a bicycle, for example, may have gone up to $45, and the bicycle still exchange for thirty bushels of wheat only, because the price of wheat has gone up to $1.50 a bushel. When a change in *prices* occurs with apparently no corresponding change in *values*, we are forced to the conclusion that the change is not in the things exchanged for money, but in the money for which the things are exchanged. In other words, changes in the general level of prices mean that money, like other things, has its value, and that its value is subject to change like other values. We say a certain suit is worth \$20.67; it would be just as true to say that one ounce of gold (the bullion equivalent of \$20.67 in coin) is worth that suit of clothes. If ten years later we find a similar suit worth \$31, and that most other things that formerly were worth \$20.67 are now worth about \$31, we shall be forced to the conclusion *not* that the value of suits has changed (except in relation to money), but that the value of money has changed; it has fallen, since half as much money again has to be given to get a suit, and most other things, as was needed ten years ago. More usually, instead of saying that the value of money has changed, we say that its purchasing power has changed; the meaning is the same, since the purchasing power of money is its power to exchange for other things.

Index Numbers. — Changes in the value of most things are measured by reference to money and expressed in prices; obviously changes in the value of money cannot be measured by reference to money. They can, however, be measured with as much accuracy, at any rate, as changes in the value of other things are measured by money. No other *single* commodity will serve as a standard of money's fluctuations, since no single commodity is free from fluctuations in value greater than the fluctuations of money; if any commodity were capable of indicating fluctuations in the value of money, it would have displaced gold as the basis of currency. If, however, we can get the *average* fluctuations in price of a considerable number of commodities, this will give us the changes in the value or purchasing power of money; this is done by making what is called an Index Number. A number of commodities are taken, and the average price of a given quantity of each in a given year noted; the prices are then totaled up and form the standard with which variations will be compared. The variation in prices in any other year can then be measured by totaling the average prices for this other year of the same quantities of the same commodities, and expressing this total as a percentage of the total for the standard year. Index numbers are regularly published by the *London Economist*, the British Board of Trade, and by *Bradstreet's* and the Bureau of Labor in the United States. Various methods are employed in compiling index numbers, questions of "weighting," averages to be employed, etc., entering into the calculation. Weighting involves giving to different commodities different degrees of importance. Averages may be arithmetic, geometric, or harmonic. The simple unweighted, arithmetic average gives results that do not differ significantly from those obtained by more exact processes. All the published index numbers agree as to the general trend of prices. The prices on which most index numbers are based are wholesale, not retail prices, although retail prices are the prices that concern the general public immediately. It is more difficult, however, to get retail prices than to get wholesale prices, and the quality of finished commodities in shops varies more than the quality of raw materials; the statistician, therefore, is forced to take the prices of raw materials and foodstuffs, and it is not unreasonable to assume that the relation of retail to wholesale prices will not be materially different at the different periods under comparison.

Effects of Changes in Price Level. — The effects of the changes in the purchasing power of money, which the device of index numbers enables us to measure, are important. Contracts are frequent which cover a period of years; a change in the general level of prices during the period alters the conditions of the contract. A farmer, for example, may take a farm on a seven years' lease at a rate based on current wheat prices; a general fall in prices takes place, and the farmer finds himself still bound to pay a rent based on high prices, while the prices he is receiving for his produce are low. A general rise in prices is adverse to the interests of all people with fixed incomes, since their money incomes will purchase for them less commodities. It is usually adverse to the interest of wage-earners. They are, as a class, less skilled at bargaining, and have less knowledge of market conditions, than the employers to whom they sell their labor; they do not therefore secure an increase in wages proportionate to the increased cost of living. On the other hand, a period of falling prices usually means an increase in the real wages of the wage-earners; this is so because, as a class, they resist reductions of their money-wages when prices are falling more stubbornly and with more success than they demand increases in times of rising prices. Business men as a class and capitalists benefit by rising prices. Production is a lengthy process; there is a possibility at each stage in it of buying materials and labor at one level of prices and selling the products at a new and higher level. They get what the classes with fixed incomes and the wage-earners lose; the "labor unrest" of the last few years of rising prices has been accompanied by a rapid and, in the aggregate, enormous increase in the amount of income assessed for Income Tax.

II

Causes of Changes in the Level of Prices

Influence of Gold. — What are the causes of these changes in the value or purchasing power of money? If gold were the only kind of money in use, the cause would be clear, viz. a change in the quantity of gold relative to other things. Gold is a commodity like other things, and its value will be affected by a change in its supply, just as the values of other things are affected by changes in their supply. If the supply of gold increases faster than the supply of other things, then more gold will have to be given in exchange for those other things; if at one time a suit could be obtained in exchange for one ounce of gold, or $20.67, after a great increase in the production

of gold, accompanied by no corresponding increase in the facilities for producing suits, a man will have to give more than one ounce of gold for a suit, perhaps an ounce and a half, or $31. To-day, however, gold forms only a small proportion of the money in use; can we still find a connection between the quantity of *gold* and the value of *money?* The answer would seem to be that the influence of the production of gold on the level of prices is greater than ever it was, but is *indirect.*

Difference between Gold and Other Commodities. — Formerly, when the precious metals were the only important medium of exchange, the influence on the level of prices of an increase in the quantity of the precious metals was direct. The owners of the new gold or silver offered it in exchange for the commodities they wished to purchase, and, in order to secure them, offered more of it than others were doing; thus they set a new and higher gold or silver price for the commodities they purchased. It may be objected that if the new wealth they had acquired had been not gold or silver, but something else, the effect would have been the same; they would have been enabled by their new wealth to outbid competitors for the commodities they wanted, and so force the prices of these commodities up. That is true, but if their new wealth had been anything but gold or silver, had been, for example, some merchandise, then the rise in price of the commodities they purchased would have been counterbalanced by the fall in price, due to the increase in the supply of it, of the kind of merchandise that they brought into the market. It is only when the new wealth which enables its holders to force up the prices of the commodities they want is *money* of some sort that the rise in price they cause is counterbalanced by no fall in price elsewhere; it is counterbalanced by no fall in price, because it is itself a fall in the value of money.

Indirect Influence of Changes in Gold Supply. — To-day the direct influence still operates, since the holders of the new gold will use it for purchases; it is, however, comparatively unimportant, first, because the proportion of gold payments to other payments is small, and secondly, because new gold nearly always as a matter of fact finds its way to some bank; the owners of the new gold prefer the convenient right to draw checks on a bank to the inconvenient necessity of handling and safeguarding large quantities of bullion. Now banks, as we saw, create currency or money by giving to their clients credits subject to checks in return for security. The extent to which they will make such advances with a given cash reserve varies with the state of feeling in business; but, other things being equal, as their cash reserve increases they can and will increase their advances, that is to say, the amount of currency or money that they create. Thus an addition to the supply of gold will indirectly, by increasing the cash reserves of the banking system, increase the amount of money in circulation by much more than the amount of gold brought in. The new money, whether it be an advance which a bank has granted on the basis of its increased cash reserve, or a current account which one of the owners of the new gold has acquired by depositing his gold with a bank, will enable its holders to offer more for the commodities which they want than they would otherwise have been willing and able to give; the prices of these commodities will rise, and the rise in price beginning with them will be transmitted to other commodities, since the sellers of them will be enabled by the higher prices they receive to offer higher prices for other commodities which they want. Thus an increase in gold-production can still affect prices, although the proportion of payments actually made in gold is small; it affects prices chiefly through bank reserves, increasing them, and thereby enabling the banks to increase their advances. Until a generation ago, the growth of the world's gold supply was slow and barely kept pace, if it did keep pace, with the increase of wealth in other forms, for each year's addition was insignificant

compared with the existing accumulations of the past. During the last generation the discovery of new goldfields, together with the discovery of the cyanide process of extracting gold from the ore, has altered this; since 1899 the annual increase in the world's supply of gold has been so great that we may expect the world's total supply to be doubled in the course of two generations. It is unnecessary therefore to look further for the chief explanation of the recent rise in prices.

Relative Importance of Changes in Gold Production. — There are, however, other influences. An increase in gold-production will raise prices only when it is greater than the increase in other forms of wealth; it is *the relation between the two* that influences the level of prices. Hence a great increase in gold-production may be counterbalanced by a more rapid increase in other forms of wealth, due to the progress of technical invention or the opening up of new countries with great and untouched natural resources, so that prices will even tend to fall. Or an increase in gold-production, in itself not very great, may be accompanied by a falling off in the production of other important forms of wealth, and prices will rise faster than they have done when the rate of gold-production has been greater. Such a falling off may be a contributory influence in the recent rise in prices; the world, and especially the United States, is filling up, the first fertility of virgin soils has been exhausted, and the secular struggle between invention and the tendency of nature to give decreasing returns to our expenditure on her may for the moment have gone against invention.

Volume of Exchanges. — There is another difficulty to be faced before we can understand the relation between the supply of money and the level of prices. Money is wanted, not for the sake of its intrinsic physical properties as are most commodities, but for the sake of its purchasing power, as a means of obtaining other things. If we use the word "money" strictly, and not as it is commonly used as a mere synonym for "wealth," we see that the want it satisfies is the want for a medium of exchange which every society practicing specialization experiences. The relation therefore on which the level of prices depends is not exactly the relation between the amount of money and the amount of other kinds of wealth, but the relation between the amount of money and the "amount of exchange" (if the phrase may be permitted) which that money has to effect; and the amount of exchange depends partly, it is true, on the amount of other forms of wealth, increasing as a rule as that increases and decreasing as it decreases, but partly also on the frequency with which these other forms of wealth are exchanged. If the amount of money is stationary, then an increased amount of exchange can be effected only at lower prices; while an increase in the amount of money, occurring when there is no increase in the amount of exchange, will send prices up, since there will be more money to change hands every time a thing is bought or sold. The frequency of exchange depends chiefly on the extent to which specialization has been carried, and, since specialization is constantly being carried further, the frequency of exchange tends to grow and to exert a depressing influence on prices. Where, however, specialization takes place *within the firm*, it does not increase the frequency of exchange, and when a number of firms that formerly bought from and sold to one another are combined into a single firm, the frequency of exchange will be reduced without any reduction in the extent of specialization.

Rapidity of Circulation. — Just as an increase in the frequency of exchanges increases the need for money and will force prices down if an increased supply of money is not forthcoming, so anything that increases the rapidity with which money circulates and does its work will have the same effect as an increase in the actual amount of money, and tend to send prices up. Thus improvements in the means of communication may, as one of their effects, tend to send prices up. An increase in the skill of bankers or in the stability of business, by enabling bankers to give more credit on the basis of a given cash reserve, will result in an actual increase in the amount of currency, tending to raise prices.

Relation of Money-value to Price-level. — The level of prices *is* the value of money. A rise in prices does not cause — it *is* a fall of the value of money, since it means that a given quantity of money will exchange for a smaller quantity than before of other things. A fall in prices is a rise in the value of money, since it means that a given quantity of money will exchange for a larger quantity than before of other things. The value of money depends, like the value of everything else, on the relation between the supply of it and the demand for it. The supply of money is made up almost entirely of gold and bills, checks, and notes, which are all of them undertakings to pay gold; any increase in the supply of gold, by enabling an increase in the issue of these undertakings to pay gold, will effect a more than proportionate increase in the supply of money. The demand for money is the amount of exchange that has to be effected by it; this depends chiefly on the amount of other forms of wealth, but partly also on the frequency with which they exchange. Temporary changes in the demand for money can be met by banks increasing or diminishing their credits; ultimately, however, these credits depend on and are limited by the gold reserve of the banks. In the long run, therefore, the chief influence on the level of prices, which is the same thing as the value of money, is the relation between the rate at which the supply of gold increases and the rate at which the supply of other kinds of wealth increases.

III

The Law of Comparative Cost

International Trade. — It remains to consider international exchange, a subject we could not take up until we had seen how changes in the amount of gold affect the level of prices. Exchange takes place between countries for the same reason that it takes place between districts in the same country, because countries are specialized and can obtain some things they need more easily by offering their own special products in exchange for them than by producing them in their own area. Exchange between countries is as a rule more difficult than between different districts in the same country. The differences in language, in currency, in law and trading custom, the greater distances and the greater risk involved as a rule in foreign trade, are all obstacles to the free movement of goods; to these must be added the obstacles deliberately imposed by governments in the shape of import duties. In spite of them all, however, the action of the middleman, buying in the cheapest and selling in the dearest market, links countries together ever more closely, and international specialization, with its correlative international exchange, increases.

Conditions Giving Rise to Trade. — Climate, the character of the soil and mineral deposits, the density of population, the degree of industrial development, fit different countries for different branches of production; by the different countries giving most of their productive powers to the work for which they are most fitted, all benefit. Each utilizes to a greater degree than would otherwise be possible its natural and social advantages, and obtains in exchange for its own products the products of other countries cheaper than it could produce them itself in the same quantity. Countries, however, often import from other countries commodities which the importing

country could produce actually cheaper than the exporting country. Thus England imports dairy produce from Ireland and Denmark, although English pastures are no less fertile than the pastures of those countries, and wheat from India where methods of agriculture are immeasurably less advanced. Farming usually declines in a district when coal is discovered under the land and coalworking begun, although the fertility of the soil is not affected by the new mining operations. The Channel Islands import wheat, using their land to raise more valuable vegetable and dairy products, and wine districts import commoner fruits which they could raise themselves at much less cost than the districts from which they import them. The fact that a commodity can be produced at a lower cost by one country than by another is no guarantee that it will pay the first country to produce it and not import it from the second; there may be other commodities in the production of which the first country has an even greater advantage, in which case it will specialize in them.

Comparative Cost. — Thus it is the *comparative* cost of producing different commodities in different countries that determines which country shall specialize in which commodity. A country may be able to produce each of a number of commodities cheaper than they can be produced in a second country with which it trades; it will not therefore produce them all for itself (otherwise trade would cease between the two countries); it will concentrate on those commodities in the production of which it has the *greatest* advantage over the other country, while the other country will specialize in those commodities in the production of which it is at the least disadvantage.

Joint Advantage. — Both countries benefit by this arrangement. Each country, by specializing in those commodities for the production of which it has the greatest relative advantages, obtains a bigger return for its expenditure of labor and capital than it would have done if it had not specialized but had devoted part of its efforts to producing the commodities for which it was relatively less well fitted. The total product of the two countries together will be greater than if each had produced *all* the commodities without specializing. Each country will be able to offer the other in exchange for the other's special products a greater quantity of its own special products than the other could have produced for itself with the labor and capital it expended *in producing the products it exported in exchange.* If England can produce both fine cottons and coarse cottons better than Germany, but has a greater advantage over Germany in producing fine cottons than in producing coarse cottons, then the tendency will be for England to specialize in the finer cottons and Germany to specialize in the coarser cottons, and for the two to exchange their special products; England will be able to offer Germany more fine cottons in exchange for a given quantity of coarse cottons than Germany could have produced for herself with the same expenditure of labor and capital as was required to produce the coarse cottons which she exported, and England will obtain a greater quantity of coarse cottons than she could have produced with the labor and capital which she expended in the fine cottons which she exported. *The cost of our imports is our exports;* so long as we can produce our exports with a less expenditure of labor and capital than would be required to produce at home the imports we get in exchange for our exports, we gain something, even if we could produce the things we import at a lower cost than the countries that send them to us. An industrial country like England *could* raise more of her food, but finds it cheaper to buy it with her manufactures from countries like Denmark and India that have not the coal required for manufactures; England *could* make the coarse cottons she imports, but to do so would be to waste the relatively greater advantage which her more developed organization and the higher skill of her artisans gives her in making the finer and more valuable cottons. If her coal-fields became exhausted, or the discovery of some new and more efficient source of power deprived her of the relative advantages in manufacture which they now give her, then she might find that her facilities for agriculture were, relatively to other countries, greater than her facilities for manufactures, and she might become again primarily an agricultural country, as she was before the eighteenth century.

IV

Imports Paid for by Exports

Complicated Nature of Modern Trade. — The cost of our imports is our exports. Our exports pay for our imports. This is not obvious, because the totals of the *recorded* imports and exports of any country rarely balance. The *recorded* imports and exports, however, never account for all the exchange of goods and services between one country and the rest of the world. Records are kept only of material commodities, while a country usually supplies and receives from other countries services as well as commodities. To understand how a country's exports pay for its imports, therefore, it is necessary to take into account *everything* of market value that the country supplies to the rest of the world, and *everything* that it receives from the rest of the world. England, for example, in normal times supplies other countries not only with its exports, but with a large part of the services of its mercantile marine, and of its banking system and insurance companies; since it receives much less than it gives in the case of shipping, banking, and insurance, it will have to receive more goods (or recorded imports) than it exports, to make up the difference. Further, citizens of the United Kingdom have a large amount of capital invested abroad; some foreign capital is invested in England, but not nearly so much. Interest is due on this capital every year, so that the United Kingdom has another claim on other countries which will be liquidated in goods or recorded imports. The export of capital swells the total of recorded exports, the corresponding "import" being the scrip which constitutes the English investor's title to the foreign stock; foreign investments in the United Kingdom swell the recorded imports of the United Kingdom, since the foreign capital will come in the form of goods, British stocks and shares being exported in return; similarly, repayment of British loans abroad will swell the British recorded imports.

Invisible Items. — A comparison of the recorded imports and exports of a country therefore will tell us little; to understand its economic relations with other countries we must take into account all the transactions that give it a claim on other countries and all the transactions that give other countries a claim on it: not only imports and exports of goods, which are recorded by Customs officers, but "invisible" imports and exports — stocks and shares, services of shipping, financial and insurance houses, hotel-keepers, etc., and claims to interest on foreign investments. So far as these two sets of claims balance they will cancel out, so far as they do not the balance will be settled by the transfer of gold; but, for reasons which we have now to examine, they always tend to balance, and the movement of gold, when they do not balance, automatically sets at work forces that tend to restore the balance.

The Part of Gold. — Imports and exports — in the wide sense of these terms that we have just described — will always tend to balance, for the same reason that the purchases which an individual can make are usually equal in amount to the sales which he can effect. The individual's purchases are limited by his income, which depends on the value of the services or commodities he sells to other people; similarly, the purchases that a country can make are limited by the value of the goods and services that it can sell to other countries, unless it is to become bankrupt. But over a short period imports may exceed exports, or *vice versa*, and the balance will have to be settled by a transfer of gold.

V

The Balance of Trade and the Level of Prices

Methods of Financing Foreign Trade. — From the point of view of the individual trader foreign trade is buying and selling, like home trade: in principle it does not differ at all. Since, however, payments have to be made in another country, and perhaps in a different currency, they are usually made not by check but, as we have seen, by bill of exchange. An importer can pay for his import by accepting a bill drawn on him by his foreign creditor; more usually he will arrange with a bank or financial house to accept for him bills drawn on them by his creditor. Or he can buy for cash in his own country a bill drawn on some one in the country of his creditor and payable there; this he will send to his creditor in payment for his import. Or he can send bullion, which is much more expensive than sending a bill. Since before the war a bill drawn on London was almost the only kind of bill which the holder could be sure of converting into gold in case of any failure of credit, bills drawn on London were preferred to bills drawn on any other commercial center; foreigners who sent goods to England preferred drawing on London and selling the bill to some one desiring to pay for goods obtained from England, to being paid with bills, drawn on fellow-countrymen and payable in their own country, which had been accepted by fellow-countrymen who had bought goods from England. Since the war bills drawn in dollars on New York have come into considerable vogue. But however the bill is created, once it is created it becomes itself a sort of merchandise, dealt in by middlemen, and fluctuating in value. This is so because the drawers of bills usually do not want to hold the bills till they fall due; they want cash, and therefore discount them, and the banks or brokers into whose hands they thus come offer them for sale to importers who have debts to pay in the country where they are payable.

Rates of Exchange. — Now let us suppose that England has been buying from the United States more than the United States has been buying from England. Then there will be Englishmen, with debts to pay in America of greater amount than the debts which Americans have to pay in England. The claims that Englishmen have on Americans will not balance the claims that Americans have on Englishmen, and gold will have to be exported to the United States to pay the difference. Now it is expensive to send gold and insure it during transit; hence bills which obviate the necessity will be at a premium. Bills will be at a premium in London, because more are wanted than are available, while bills will be at a discount in New York, because there are more available than are needed to pay American debts in England. It may, however, happen that while England has bought more from the United States than she has sold to the United States, she may have sold more to Germany than she has bought from Germany, and Germany have sold more to the United States than Germany has bought from the United States. In that case the English traders will be able to purchase bills in Berlin which will be acceptable in the United States, where they will be used to meet German claims in the United States. Thus the indebtedness of England to the United States and Germany together and the claims of England on the United States and Germany together will just balance, and the transfer of gold be averted. But the existence of "three-cornered" exchanges like this does not alter the principle; at any given time a country may have more debts to pay than it has claims to present to other countries, the exchanges will be "against" it, gold will have to be transmitted, and bills which have only a short term to run and obviate the necessity to transmit gold will rise above their face value.

"Gold-Points." — There are limits to the fluctuation in the value of bills. If the demand for a foreign bill so exceeds the supply that the premium on it rises above a certain point, it is cheaper to pay the expense of sending bullion; this sets an upper limit to the bill's fluctuation. If the supply so exceeds the demand that the value of the bill falls below a certain point, it pays either to hold it until it falls due or to send it to the place on which it is drawn, get it discounted, and pay the expenses of bringing the gold back. For example, the bullion equivalent of an English sovereign in United States money is \$4.8665 (called "the mint par"); it costs about \$.03 in normal times to transfer (and insure during transit) a sovereign between London and New York; hence the limits to the fluctuation in value of London bills in New York or New York bills in London are \$4.8365 (4.8665 − .03 dollars) and \$4.8965 (4.8665 + .03 dollars); these are called the "gold-points," because they are the points at which it pays to transmit gold instead of bills. In the case of exchange with countries having a silver or inconvertible paper currency, we have corresponding "specie-points," at which it pays to transmit specie; but we cannot in this case state what these points will be, since there is no mint par of exchange, and the value of bills varies with the value of silver (or the inconvertible paper money) measured in gold, as well as with the changes in the supply of them and demand for them. It should be stated that there are certain exceptional cases, of no great importance, where the value of bills fluctuates beyond the limits set by the gold-points.

Effect of Gold Movements. — Suppose the United States has been buying more than she has been selling, so that the exchange is against her and it becomes cheaper to transmit gold than it is to send bills, what is the effect of paying these foreign claims by sending gold out of the country? We have seen that the level of prices generally is intimately connected with the supply of gold; over a short period the same intimate connection exists between the supply of gold *in any one country* and the level of prices, since there are, as we have seen, obstacles to that free movement of wealth from country to country which would be needed to maintain prices at a uniform level in all countries. Therefore when the foreign exchanges move against the United States and it becomes necessary to send gold out of the country, the level of prices in the United States will be affected. Banks, having their reserves depleted, will restrict their advances, thus lessening the purchasing power of the business community, and prices will fall. While prices are falling in the United States, the gold the United States is exporting will be having just the opposite effect in the countries to which it has been sent, that is to say, it will be raising the level of prices there. Now, the fall in prices in the United States will make it profitable to foreigners to buy in the United States goods which previously they could get cheaper elsewhere, and will thus stimulate exports; especially will foreigners take advantage of the low prices to buy American Stock Exchange securities. At the same time the rise in prices in the countries to which the gold goes will check American purchases there. Hence the tendency of the United States to buy more than she sold, which gave rise to the unfavorable movement of the exchanges and the export of gold, will be reversed; the United States will tend to buy less and sell more, and the balance between the claims for and against her will be restored. As a result of this change in the balance of trade, bills will become more plentiful at home and will fall within the upper gold-point; they will become less plentiful abroad and will rise above the lower gold-point, so that the necessity for transmitting bullion disappears.

Thus, international payments are settled by canceling

contrary claims through the medium of the bill of exchange. Gold is used only to settle balances when the claims which a country has on other countries do not quite equal the claims which other countries have on it; and the movement of the gold starts a change in levels of prices which leads to a restoration of the balance between a country's purchases and its sales.

CHAPTER XII

THE CIRCULATION OF WEALTH

I

Wealth and Production

Involved Character of Wealth. — We have not yet asked ourselves the question, "What is Wealth?" It did not arise in our study of the economic structure of society; but it must be faced before we go on to the study of distribution. In the deepest sense in which the word "Wealth" can be used Economics does not attempt to answer the question; because in the deepest sense of the word the question "What is Wealth?" is a moral question. Our view of true wealth depends on our moral and religious views. Christian and Mohammedan, artist and manufacturer, scholar and drunkard, have different views as to what is true wealth. But in the ordinary use of the word they all agree; in ordinary speech we ignore this deeper meaning of the word "Wealth," and Economics follows ordinary speech in this respect.

Income and Wealth. — In ordinary speech a wealthy man is a man with a large income. How do we state a man's income? Usually in dollars and cents, and in the same way we state a country's income in terms of money. So we say that the United States is a wealthy country, having an income of some forty or fifty billion dollars a year. But the dollars and cents are not the wealth. No one, except the miser, desires them for their own sake; they are wanted only for

their purchasing power — we state wealth in terms of money merely because money is the only standard of wealth we have. The real wealth consists of the things that the money will purchase, and of those things we think when we try to realize what wealth is; the precious metals and precious stones, the materials and implements of manufacture, foodstuffs, land, and buildings, these and not their money prices are what we mean by wealth. But there are other, less tangible things we buy with money — the surgeon's skill, the musician's art, the services of preacher and teacher, and a thousand others; what have these in common with the tangible, obvious forms of wealth we thought of before? They have only one quality in common, they satisfy human want and desire, and it is that quality that makes us regard them all as "wealth."

Characteristics of Wealth. — The power to satisfy human want, or aid the satisfaction of human want — that is what the economist, following the usage of ordinary speech, requires of a thing to make it wealth. "Anything that satisfies, directly or indirectly, a human want, and is not unlimited in quantity," is the definition of wealth that Economics, following ordinary usage, has formulated. No matter what the want is, whether it is bad or good, men regard as wealth the means for satisfying it; opium and quinine, Shakespeare's plays and the latest sensational novel, gold and iron, are all alike forms of wealth because they satisfy wants; the production of them swells the national income and enriches their owner. The means of satisfying the want must not be unlimited in quantity, or it will not be regarded as wealth; a thing must not only satisfy want, but must require some effort or sacrifice to acquire it, before it comes to be regarded as wealth in the ordinary sense of that word. Air and sunlight therefore, although far more important to life than steam-engines and gas supplies, do not count as wealth in the estimation of any individual's or any community's wealth, while the latter do.

Nature of Wealth Production. — If wealth then is the satisfaction of human want, any one or anything that satisfies a human want or helps to satisfy it, is producing wealth. There are individuals in society who receive incomes without producing anything; they are sometimes called parasites. Property-owners, for instance, receive income without producing anything; but their property helps to satisfy human wants in the many ways we have seen. If it is land, it is the source of raw materials; if it is capital, it is producing in the form of machines, or keeping workers while they are engaged in the roundabout methods of modern production. And in all Western countries the rule is, that anything that is produced by a thing is the property of that thing's owner. The rule may be a bad one — we shall criticize it in Chapter XXII — but it differentiates property-owners from the parasite proper, who lives upon gifts, taking no part directly or indirectly in the productive process. It is sometimes thought again that such people as managers in factories and middlemen in commerce are not producers, because they do not alter in any way by their labor the shape of the materials of manufacture. As we have seen, however, these classes are necessary to organize the work of specialized workers, if society wishes to utilize the advantages of specialization, and in that way they help production; production would not be so large or so varied but for their work.

Immaterial Wealth Production. — The professions must also be regarded as productive. It is true that they produce nothing material or tangible, but they satisfy human wants. If the farmer is a producer because he produces food, the doctor must be considered one if he helps us to digest the food. If the workman is a producer because his skill shapes material objects to our needs, the technical teacher who has helped the workman to get that skill must be considered a producer; and the technical teacher's work is based on the discoveries of pure science, which must therefore be regarded as productive.

And the same is the case with the servants of governments. The ordinary work of production could not go on unless law and order were maintained. Men and women cannot live together in societies without rules to prevent them from getting in one another's way, and a whole machinery of government is needed to enact these rules and to see that they are carried out. Indirectly, therefore, civil servants and the judicial services are helping to satisfy human wants, *i.e.* are producing wealth. If, then, men's wants and desires were for material things only they could not be satisfied without the labours of all sorts of professional men, whose work therefore is productive. But "man doth not live by bread alone"; human nature seeks satisfactions which are not given by material objects. It has other wants besides material ones, and any person who satisfies these wants is producing wealth in exactly the same sense as the workers who produce any material object. The preacher and the teacher, the artist and the journalist are all of them engaged in satisfying human wants, are all of them producers.

The view that only the production of material objects is true production would tell against the views of its holder if pushed to its logical conclusion. In that sense no man ever produces anything. The fundamental laws of physics are the conservation of energy and the indestructibility of matter, and what man does is to change the form of matter given by Nature, to change the kind and direction of energy given by Nature; he alters, shapes, and directs forces, not creating anything. At the end of all his work there is the same weight of matter and the same volume of force in the universe as there was at the beginning. What all labor is directed to is the satisfaction of human wants, and that satisfaction is wealth, whether it is given directly in the form of services or indirectly by giving to some material object the shape and form which will enable it to satisfy human wants.

II

Income and Capital

Immaterial Elements in Wealth. — We have spoken throughout of "income"; this is not in accord with the usual notion of wealth. The usual notion is that wealth consists of a stock or fund of objects, and that the wealth of a community could be stated in the form of an inventory of all the goods in the community. This view is partly due to the belief that only material objects form wealth, though, as we have seen, material objects themselves are only wealth because they have the capacity to satisfy human wants. Such an inventory would include much of the wealth of a community at any moment — its lands, its machines, its raw material and finished goods, its buildings and their furnishings, and so on; but it would exclude some important forms of wealth, some important possessions which enable us to satisfy wants. It would exclude the skill of the workman and the knowledge of the scientist and the organization of industry, all, that is to say, that enables us to keep up our stock of material objects, to replace what decays or wears out; and it would ignore all that the professions can do to satisfy human wants, since it would include only the surgeon's instruments, while ignoring the skill that enables him to use them.

Income as Measure of Wealth. — Such a method would be a very imperfect method of dealing even with material objects. What, for instance, would be the use of including in an inventory a machine without giving us any indication of what the machine could do? It might give the original cost of the machine, but that is no indication of the capacity of the machine to satisfy wants, since the machine may be worn out or have become obsolete. It is only by the product of the machine, by the income which it will give, that we can tell its value, and if we wish to state the value of the machine in a lump sum we can do so only by capitalizing the income derivable from it, *i.e.* by calculating what sum of money would be needed at the current rate of interest to give an income of the value of the machine's product. If we wish to represent wealth as a fund or stock, we could get it only by capitalizing incomes generally. The present value of a house is not what it cost to build, but so many years' purchase of the rent it will yield. The value of a doctor's skill is his income, multiplied by the number of years that he will be able to exercise his skill. If we wish, then, to measure the wealth of a society we can do it only by calculating its income, not by totaling up the value of the goods it may possess at any moment.

The notion that wealth is a stock or fund, and income the fruit of this stock, is a conclusion very easily drawn from certain aspects of production. Land gives an income in the form of crops, and the land remains when the crop has been taken. A flock gives an income in the form of the year's clip and the year's lambs, and the flock is there at the end of the year. A machine produces so much every year, and at the end of the year the machine remains apparently much as it was at the beginning. We invest our savings in some company, and each year we draw a dividend on our capital which leaves the capital unimpaired and ready to yield a dividend next year. This view does not go below the surface. The dividend is not always paid. It is not paid when the expenses of the business exceed the receipts. When it is paid, it does not represent the whole of the product of the business for the year, because, before the business could pay any dividend at all, it has had to pay out of its product all the expenses for labor, management, and materials. It has had to replace from the same product all the wear and tear of plant and buildings. Only a very small part of the entire product of the business reaches the owners of the business in the form of dividends; the greater part has been needed to keep the business alive, because businesses wear out. A machine does exist at the end of the year apparently in the same condition as it was at the beginning of the year, but the sameness is only apparent. All through the year the machine has been wearing out. It has been growing obsolete, and out of the product of the machine the cost of this wear and tear has to be taken, and a sinking fund supplied to provide a new machine when the present one is obsolete. The machine is being " consumed," only we do not notice it because the consumption is so gradual. Even land, agricultural land, has not the permanence that we commonly attribute to it, because it loses its fertility and this fertility has to be restored to it. It continues to yield a crop only because some of the value of each year's crop has been put back into it in the form of manure and work; and if this is the case with the land itself, much more obvious is it that the farm buildings, dikes, fences, etc., all wear out and have to be replaced before there is any net income received from the land.

Necessity for Replacement. — In a word, everything that we produce is consumed; if the consumption is objectless we call it waste, but by deliberate use or waste everything is consumed. Usually the instruments of production wear out slowly, they are used many times. But it is not their greater durability that constitutes them capital, it is their use; capital is not certain forms of wealth, but any form of wealth put to a certain use, namely that of assisting the production of further wealth. The manufacturer's loom is capital, because it is aiding labor in the production of cloth; but the cloth on the tailor's shelves is equally capital, since it enables him to carry on his business, to give his customers what they want when they want it, without keeping them waiting while he orders it. Capital wears out or grows obsolete, and has to be replaced; the capital of a company remains the same in apparent amount, only because this constant replacement from income is duly kept up. Land becomes exhausted, and has to be revived. Land and capital remain the same in the same way as the schoolboy's knife is the same when it has had two new blades and a new handle. We are told that the substance of the human body is renewed completely every seven years; in the same way the substance of the economic body of society is constantly being renewed; land, labor, and capital produce, and out of their product they are renewed.

III

Spending and Saving

Need for Saving. — This constant decay and renewal is the explanation of the title given to this chapter, the circulation of wealth. If we think of society as a body and wealth as the blood, the agents of production are the heart, continuously taking in and giving out wealth. This regular renewal of the means of production does not go an automatically; it requires continuous effort and sacrifice, and the great volume of wealth required for this purpose is one reason why the flow of wealth, which can be annually distributed as wages, profits, and rent, is no larger than it is — one reason for the apparent discrepancy between society's income and its vast productive power. At any moment the productive capacity of society is limited by the amount of its capital, the natural riches and state of development of its land, and the number and efficiency of its population. It can always increase its productive capacity by increasing its capital, improving its land, or increasing the efficiency of its population; but if it wants to use its current income for any of these purposes, it cannot use them for the satisfaction of current wants.

Difference between Spending and Saving. — Individuals and society have at every moment to decide how much of their income, how much of the productive capacity at their command, shall be devoted to aiding future production. That part of income that is devoted to aiding future production is said to be saved. That does not mean it is not spent or consumed; it means that it is spent or consumed to aid further production. If the income has been received in cash, the saved portion is put in a bank and the bank lends it to business men who use it to aid their work of production; or it is invested; that is, the owner puts it into a business which uses it to buy buildings, plant, materials, etc. We may put the case concretely by saying that "savings" constitute a demand for buildings, machines, materials, and stock-in-trade, while the rest of income is a demand for food, clothing, shelter, and other goods and services for immediate consumption; both are spent, but the object of spending is different in the two cases.

Expense of Capital and Labor. — If the wealth of a country is to be maintained, the depreciation of capital, the repairs and renewals of land, and number and efficiency of its workers must be kept up out of its gross income. Business men recognize this when they speak of the danger of "driving capital abroad" by oppressive taxation. The machines and buildings at present in use as capital cannot be exported; but the income derived from these machines and buildings can be applied not to repairs and renewals of them, and additions to them at home, but to the establishment of new factories abroad. Similarly, land may be neglected, and give a decreasing income year after year. But the greatest danger to the future prosperity of a country is the neglect of its workers. Underfed, badly housed, ill-educated, or casually employed workers give inefficient labor, and these ill effects are cumulative, since the present generation is largely responsible for the quality of the next. Similarly oppressive legislation, or the absence of legislation to prevent oppression, which to-day is a greater danger, will drive labor out of the country. The growth of England's manufactures before the Industrial Revolution was greatly helped by the immigration of Flemings and Huguenots who were driven from their native countries, and England's gain was the other countries' loss. Social inequalities may have the same effect as oppressive legislation. There is no doubt that the European working man of enterprise and energy has better prospects in the United States, Canada, and South America than he has at home; hence the constant exodus from Europe of emigrants who, discontented with their prospects at home, go to contribute to the wealth of countries where the career open to talents is nearer realization.

IV

The National Dividend or Income

Demand for the Factors of Production. — Because wealth is a "flow," a country can always pay for new goods and services; there is always a demand for additional labor, capital, and land; there is always room for new inventions and improvements in organization. This assertion may seem strange when we are constantly hearing of capital seeking investment, land lying idle, and, above all, labor unemployed. It is perfectly true that capital, land, and labor are often unemployed; but the reason for their unemployment is certainly not that the income of the country is fixed and limited, so that any labor-saving device, whether machinery or better organization, must permanently displace some of the labor and capital at present employed; there may be a temporary displacement, and some workers may suffer, but in the long run the introduction of "labor-saving" machinery increases the demand for labor.

Example. — Let us work out an example. A shoe manufacturer, employing a hundred hands, introduces a machine which enables him to produce with seventy-five hands as many shoes as before; what happens? He may decide to produce more shoes and keep on his hundred hands; if he makes more shoes, he will have to sell them at a lower price —

as presumably he can do, thanks to his new machines — or the market will not take them. The net effect in that case is that no labor is displaced, additional labor is required for making the machines, and some people who could not afford his shoes before can afford them now. But suppose he does dismiss twenty-five hands. The additional demand for labor to make the new machinery still remains, but that is not equivalent to the falling-off in the demand for labor in the shoe factory. The true equivalent is found in the increased demand which the manufacturer makes for labor owing to his increased income. His expenses of production are less, he has as many shoes as before to sell, therefore his income will be bigger. He will spend the increase or " invest " it; if he spend it, it constitutes a new demand for the labor required to make the things he wants; if he invests it, it constitutes a new demand for the labor required for the machines, buildings, etc., of the business in which he invests it.

In time, however, other manufacturers will adopt the new machinery, their competition will compel our manufacturer to reduce his prices nearer the cost of production, and his income will come back to its old dimensions. Correspondingly his demand for labor will fall, and we seem to have a net reduction in the demand for labor. But we have ignored the fall in the price of shoes; that fall has released so much of the income of all the people who buy this class of shoes, and enables them to buy either more shoes or more of something else; thus even if their demand for the labor of shoe operatives has fallen, their demand for the labor of the operatives who make the other things that they buy has increased. If they decide, as is perhaps the most usual case, to buy more shoes, then their demand for labor of all kinds remains the same as it was before. Provided, therefore, that the twenty-five shoe operatives displaced by machinery can find out what will be wanted either by their employer, who now has a bigger income to spend, or by his customers, who, getting their shoes cheaper, can buy something they could not afford before, they will not be unemployed.

Labor-saving Machinery. — It is something like this crude example that usually happens when " labor-saving " machinery is introduced. Usually the introduction is gradual; often the new machinery is used only for a cheaper class of goods that was not made before. The output of the industry, introducing the new machinery, will not remain stationary, and some of the hands — perhaps all — who would have been displaced if the output had remained stationary will be kept on to work the new machines. But if some are displaced, there will be an increase in the demand for labor in other industries owing to the increased purchasing power either of the employers in the industry or of its customers, or of both. If any workers are displaced, it will take them time to find new employment, and the new employment may be less remunerative than the old; some of them who are old or highly specialized may be unable to find new employment at all; but somewhere or other there is an increased demand for labor due to the introduction of " labor-saving " machinery. When investigation of unemployment is made it is usually uncommon for an employed man to give the introduction of machinery as the cause of his unemployment; even more conclusive is the fact that while labor-saving machinery has been steadily increasing in quantity for now over a century, and with increasing rapidity in the last forty years, there is no evidence that unemployment has increased or is increasing. The effect of machinery on wages we shall examine elsewhere.

Using the Idle. — Exactly similar is the case of the employment of people who are not dependent on their work for a living. The rich girl who decides to work for her living is not necessarily " taking the bread out of the mouth of " some one else. Suppose she takes a post as teacher at $600 a year; her income is increased by $600 a year, she spends $600 a year more than she would otherwise have done;

there is $600 worth of demand for labor, capital, etc., more than there would have been if she had not begun to work. But what of the girl whom she has kept out of the post? Would not she have earned $600 and offered the same demand for the goods and services of others? True, and so long as she remains unemployed, the rich girl is displacing her; but does she remain unemployed? do we find as a matter of fact that as American women have forced their way into the professions and adopted the custom of working, the openings for poorer women have become less and unemployment among them greater? We do not, because the income which these rich girls are now earning is an *additional* demand for labor of all kinds; their work adds to the real income of society and therefore to the means that society has to pay additional workers.

Increase of Population. — The case of the rich man's daughter is trivial, but it is exactly similar to an extremely important case, that of the addition to the population which a progressive society sees with every new generation. Every year in the United States fully 1,000,000 more human beings are born than die. That means that every year roughly 1,000,000 more persons have to be made room for in industry and commerce; employment and payment has to be found for nearly 1,000,000 new workers. Whence can this new employment and payment come? Society is already spending or investing all its income, there are already unemployed workers. It can come from only one source, from the new workers. There are 1,000,000 people to feed, clothe, and amuse — plenty of employment there; and there are close on 1,000,000 more people producing and earning — a plentiful source of payment there! Additional textile operatives are needed to clothe the new population, building operatives to house them, farmers to feed them; and the new population *is* these additional textile operatives, building operatives, and farmers.

Flexibility of National Income. — The National Income is not a fixed sum limiting employment to a fixed number of workers. There is always room for an increase in production, whether that increase be due to a new and more efficient machine, the labor of hitherto unoccupied workers, or the more efficient organization of the workers already in employment. There is always a demand for this additional product, because the addition to society's income enables society to pay the additional workers or machines or organizers. In Dr. Marshall's words, the National Income or " National Dividend," as he prefers to call it, " is at once the aggregate net product of and the sole source of payment for all the agents of production." What we call " Supply " and " Demand " are the same things looked at from the different standpoints of consumer and producer; and consumers and producers are the same persons. The real National Income is the goods and services produced to satisfy the nation's wants; it is these that land, labor, and capital produce, and it is with these that land, labor, and capital are paid: any increase in the product is an increase in the payments; and the only reason why this is not obvious is that the separate producers exchange their product through the medium of money. Most people who receive an income contribute to production, either in their own persons by their work, or as owners of property which aids production. As producers they are highly specialized; they want things they cannot produce themselves, and they obtain them by exchange. This exchange is the outcome of specialization, and is the fundamental thing in the present economic organization.

Relation Between Supply and Demand. — It is only because our exchanges are made through money that we have any difficulty in perceiving that an increase in supply is (not " causes ") an increase in demand. If the community consisted of only four men, two farmers, a builder, and a weaver, and they exchanged their goods, then the weaver's supply of cloth would obviously constitute a demand for buildings and food, the builder's supply of buildings a demand for cloth and food, the farmer's supply of food a demand for buildings and cloth. The same products are both supply and demand, according to the point of view from which we are looking. In the modern complicated community the same is the case. The weaver's supply of cloth is exchanged by him for gold, and the gold then exchanged for buildings and food; he sells cloth and buys buildings and food; his demand for house room and food is due to and is proportionate to his supply of cloth. If he makes more cloth he can buy a bigger house and more food, or if he does not want a bigger house and more food, he can buy something else. Thus an increase in the supply of cloth is an increase in the demand for other things; and *vice versa*, an increase in the supply of anything else may constitute an increase in the demand for cloth. What is divided among the members of society is the goods and services produced to satisfy its wants; and the same goods and services are both Supply and Demand.

This exchange is independent of the way in which the value of the product is distributed among the factors of production. Whether capital, land, or labor gets it, it is a demand for other goods; because capitalist, worker, and land-owner all spend their incomes. It is sometimes suggested that the present economic system must come to an end because the workers do not receive in wages as much as they produce, so that they cannot buy back what has been produced. That, if true, is a very bad thing; but it would not supply an explanation of unemployment. If the workers do not spend the whole price of the product, some one else does; it *is* spent. Goods are produced to be exchanged, and exchanged they will be, whether by land-owner, capitalist, or laborer.

CHAPTER XIII

UNEMPLOYMENT AND OVERPRODUCTION

I

Imperfect Coöperation between Specialists

Why Unemployment? — The sketch of economic society that was drawn in the last chapter is defective in one important respect. Society is made up of specialized groups of producers, mutually dependent and engaged in the continuous exchange (through the medium of money) of their special products; wealth takes the form of a continuous stream of goods and services, from which the means of production are constantly renewed and augmented; new workers, new implements, new natural resources are constantly adding their contribution to the stream of goods and services, and by that contribution securing for themselves a place in the economic community and a claim on the stream. The sketch did not, however, indicate how there comes to be any unemployment; how it comes about, in other words, that a system which regularly absorbs the new generation coming into industry every year is unable to absorb, however busy it may be, the whole of the workers who are willing and anxious to find work. Nor does it explain the regular recurrence of the related phenomenon, which we call, according to the point of view, overproduction or under-consumption. It would require a separate (and longer) work to deal with these latter problems adequately; all that will be attempted in this chapter is to show that they are not inconsistent with the account of the working of the economic system, given in the last chapter, and that they are connected with principles of the system which we have studied in earlier chapters.

Importance of Coöperation to Specialization.—The principle on which the whole system is based is specialization. Different kinds of labor, land, machinery, materials are all limited to one or a few uses, and in isolation are useless. The specialists must coöperate before they can produce anything of use. Whenever the coöperation is defective, the system will not work or will work badly. *Specialization without coöperation* then is the first great danger to which the present system of production is exposed.

Defective Coöperation. — A single firm is an organization of specialized workers, specialized machines, specialized departments. In a well-organized and well-managed firm every worker, machine, and department coöperates harmoniously with every other; all are fully occupied, without being overworked. But often the coöperation is not perfect; one department, under-staffed or inadequately equipped, or for some other reason inefficient, will hold up several other departments at one time, and compel them to work overtime to make up arrears at another; just as a single weak back will let down a whole football team. In the single firm there is a general manager, whose business it is to see that all the departments of the firm work together evenly and regularly. But coöperation between specialized firms in an industry is as important in modern industry as coöperation between separate departments in a firm, and there are no general managers of whole industries. Weavers, spinners, wool-combers, wool-growers, and many others coöperate in the production of woolen fabrics; their operations must have a certain proportion to one another, each stage of the industry must be adjusted to the wants and capacities of the other stages, or their coöperation will be defective. If the spinners expand their business more rapidly than sheep-farming expands, they will presently find that there is a shortage of material, which will bring in its train short time or unemployment for spinners' operatives, and also, though this is not a serious social problem, for spinning machinery. If the production of wool is increased and the manufacturers do not expand their plant in a corresponding degree, the spinners, though now able to get their material, will find themselves unable to dispose of their product, and there is overproduction of yarn. By the time the manufacturers are ready to take all the yarn that can be produced, the spinners and wool-growers, discouraged by the difficulty they have found in disposing of their product, may have reduced production — which involves unemployment or short time again for spinning-operatives and firms — and so a shortage of material for manufacturers and short time or unemployment for their operatives. Society relies on its organizers to secure the same coöperation between the different processes of one manufacture in the hands of different firms, as the general manager secures between the different departments of his firm, and the organizers often fail.

Difficulties in Way of Coöperation. — Within a single industry such disorganization should not be difficult to avoid; in industry as a whole it occurs much more easily and frequently. An increase in the exports of certain manufactures may lead to an increased demand for ships to carry the exports; the shipbuilding industry, responsive to this increased demand, enlarges its output. By the time the new ships are ready, however, three years may have elapsed and the need for the increased shipping have disappeared; the result is a serious check to the shipbuilding industry. The different industries are one another's customers and colleagues; an expansion of one, if it is not to be checked, calls for a corresponding expansion of others. But the *different industries require different lengths of time for the delivery of their products.* It is difficult therefore to insure among them the harmonious coöperation which the modern industrial system requires.

Immobility in Productive Factors. — A great difficulty in the way of securing perfect coöperation is the lack of *mobility* in the factors of production. There may be firms working below their full capacity for want of hands in one part of the country, while in another part men are on short time or unable to find employment, through some purely local cause, such as the bankruptcy of an employer. It takes time for the owners of the idle machinery and the owners of the idle hands to find each other; the object of the Labor Exchange is to enable them to find each other with the least possible trouble and delay. Normally the needs of an expanding industry are met by an increasing proportion of the new generation going into it, but there are only the beginnings of system of ascertaining where the new labor is wanted and directing the new generation in that direction; boys and girls are constantly entering industries which will not want them in a few years. Again, the methods of industry are constantly changing. New processes, new material, new machines, new markets, new systems of organizing work, are constantly being adopted; but labor, capital, and land are all specialized, and any change of method renders them, if not useless, at any rate less useful, until they can be adapted to the new methods. This takes time, and while it is taking place there will be unemployment and other dislocation. The loss of value which skill and machinery suffer by such changes of method are a kind of bad debt which society must write off before striking a balance of the advantages of specialization.

II

Imperfect Anticipation of Demand

Estimates as Basis of Production. — The second principle of the present organization that bears on the problems we are studying is the principle that production as a whole is carried on in anticipation of demand. Specialization has been carried so far, and has resulted in an organization so complex, that the production of most commodities begins many months before they are required. Individual firms may work to order or on contract, but that arrangement only shifts on to other shoulders the burden of anticipating what will be wanted. Whole industries may work to order; the firms engaged in works of construction and engineering work almost entirely to order, and by varying their staffs to meet their requirements succeed in throwing the burden of meeting irregularities in the demand on to the shoulders least able to bear it, the shoulders of the workers. But these industries are engaged chiefly in supplying other industries with aids and facilities for production, and these other industries are working to meet a demand which has to be estimated, because the process of production must begin before it is expressed. The goal of most production is the retail counter, and the consumer expects to be able to get what he wants at that counter without giving notice beforehand. Production as a whole therefore is carried on on an estimate of demand.

Stability of Demand. — The demand for most things is fairly stable, and we saw in Chapter IV that society has ways and means of estimating what demand is going to be. But mistakes are bound to be made. Things are made, which, when made, are not wanted, or are not wanted so much as other things that have not been made. The coöperation between different specialists of the woolen industry may be perfect, and yet overproduction of woolen goods occur, because the consuming public, for whom the woolen industry works, prefer to spend their incomes less on woolens and more on other things. When we consider the variety of goods ready for sale in retail shops and the complexity of the organization needed to produce each of them, and realize at the same time that that organization has been brought into being and applied to the production of the goods without any expressed demand for them, it becomes matter for surprise, not that the productive organization is occasionally misdirected, but that it hits its mark so often as it does.

Overproduction. — Let us be quite clear what we mean by overproduction. It does not mean that more of the article has been produced than can be consumed or used; it does not even mean that more has been produced than can be sold. Any quantity of a thing that has a use can be sold, if the price be put low enough. What overproduction of an article means is that more of the article has been produced than can be sold at a price big enough to repay its makers the cost of production, plus sufficient profit to induce them to go on producing at the same rate; all that has been produced can be sold, but only at a loss. The error may be in what the public wants; a trifling error, perhaps, as when a fabric is produced that fails to capture the fashionable public's taste, or a new form of amusement is provided that does not " catch on "; or a serious error, involving the uneconomical application of large resources, as on a railway which, when completed, does not attract a sufficient density of traffic to make it pay. The important case, however, and the case which has most influence on trade fluctuations, is an error in anticipating *how much* the public wants. The leaders of an industry may anticipate exactly what is wanted, but produce it in excess of the public's demand. The income of the public is limited; it balances the satisfaction to be obtained from one thing against the satisfaction to be obtained from other things; it can be induced to increase its purchases of a thing by a reduction in the price, it will usually restrict its purchases if the price is raised; but at any price it will purchase only a certain amount of each thing, and if producers produce in excess of that amount they will be able to sell the whole of their output only by lowering the price.

Effect of Competition. — The absence of any central control of production encourages such overproduction. Each of a number of competing firms may anticipate accurately how much the public will take at a given price, and yet overestimate the proportion of the total demand which competition will allow him to secure. The result is that each puts on the market more than his fair proportion, and the total amount put on the market is greater than the public will take at the price which the producers counted on getting; one of the great advantages of trusts and combinations is, we saw, that it lessens the risk of committing this error of anticipation.

Whatever the kind of error, however, errors of anticipation are constantly being made, and their effect is always the same, the defective adjustment of supply to demand. If the supply put on the market is greater than the demand for the commodity at the price on which producers counted, the producers will have to reduce their price if they wish to sell their whole output. If they reduce their price, their profits will be less than they anticipated, and they will lessen production; if they hold out for their price, they will be unable to sell their whole output, and the market will be glutted; in either case there is a check to production. If the error of anticipation is in the opposite direction, and less is put on the market than the market will take at the anticipated price, competition among buyers for this limited supply will force its price up, the higher price will yield profits higher than were anticipated, the higher profits will stimulate increased production, and the probability is that the relative scarcity will be succeeded by a relative excess, the stimulus to production by a check to production. The stimulus to increase production carries with it its own antidote, since the increase in supply will tend to force prices down and so check production. Similarly, the check to production brings about its own correction; things continue to wear out and stocks continue to be consumed, although the supply of new stocks has been checked; the time comes when the public has to buy, and when that time comes, the relative scarcity of the depleted supply enables the producer to get his price.

Summary. — To summarize, the price of a thing depends on the relation of the supply of it to the demand for it; if the supply is relatively small, the price will tend to rise, and the higher price will stimulate increased production, until the supply equals or exceeds the demand; if the supply is relatively large, the price will tend to fall, and falling prices check production, until the price rises again. Overproduction and underproduction occur because supply has to be adjusted to demand ahead of demand, on an estimate of it, not in response to an ascertained and definite demand. If the estimate is wrong, the price, on the basis of which production has been carried on, will not be realized, and the even flow of production will be dislocated; it is the relation between the *anticipated* price and the *realized* price that matters.

III

Cyclical Trade Fluctuations

Irregularity of Trade. — Alternating overproduction and scarcity, with their consequences, unemployment and overtime, can be put down in any single trade to the failure to anticipate demand accurately and adjust supply to demand evenly. Much more difficult to explain is the problem presented by the fact that overproduction occurs, not in one industry at one time and in another at another time, but in all or most industries at the same time. The circulation of

wealth is subject to general fluctuations, the most marked symptoms of which are alternating periods of overtime and unemployment. At one time producers in *all* trades cannot work fast enough to satisfy the demands of the market, employers in all trades cannot get the operatives they want; at another time producers in *all* trades cannot find a market for the goods they are producing, and employers in all trades dismiss or put on short time their operatives. What is the cause of this general movement up and down? Without pretending to offer a complete explanation, one or two suggestions may be put forward.

Intertrade Dependence. — The separate trades are one another's customers, so that depression in one affects the others. Producers are also consumers; if therefore the producers in one trade are getting lower wages and lower profits, they can spend less on the products of other trades. Conversely, if one trade revives, it will influence other trades; its members, since they are selling more, are able to buy more, and the improved demand for their goods and services is transmitted to other trades by their increased purchasing power.

Psychological Factors. — This material bond between trades, however, is not enough to account for the rapidity with which depression or boom spreads from trade to trade over the whole field of industry. The connection seems to be psychological. The leading men in all trades are all looking ahead. Their estimate of future demand should be the result of a severely scientific balancing of evidence, backed by a specialized instinct born of long dealings with a certain market. To some extent it is that, but not altogether. Few men can resist the influence on their own opinions of the hopes and expectations of their associates. A market is a crowd, and has the psychological characteristic of the crowd, that the general opinion imposes itself on individual members with extraordinary force and rapidity. Hence if a strong opinion is started — no matter how — that trade is improving, then that opinion will spread; the most level-headed operators will be influenced by it. Manufacturers will increase their output and pay higher prices for materials and higher wages to get more labor, since they anticipate no difficulty in selling their goods, and the market will take any amount. And so long as every one is of this opinion, trade will be good. Exchange goes on freely even at high prices, because the man who is buying at high prices is confident that, by the time he sells, prices will be higher still. Every trade, being busy, affords a brisk demand for the products of every other trade.

In precisely the same way an opinion that demand is falling off will impose itself on the business community. The transition from the one state of mind to the other may be brought about by chance; a leading firm may take fright and begin to cut prices before its competitors; other firms, observing its action, follow suit, and other trades, observing the fall of prices and consequent slackening of production in the one trade, are shaken out of their optimism. A great bankruptcy may turn the current of opinion, however unrelated the failure of the particular firm may be to the general course of trade; the slump that follows a war, a wet season, the death of a monarch followed by general mourning, may any of them, by affecting one trade or set of trades, turn the tide. More usually it will be brought about not by chance but by the occurrence, almost inevitable in the present system of production, of overproduction in one or two trades, and opinion in them will infect opinion in industry generally. Once set in, the depression is accentuated by the refusal of sellers to lower prices. They hold out for the high prices which are now a thing of the past; being unable to sell, they are unable to buy, and the circulation of wealth is checked until they give way. Improvement comes, in industry generally as in a single industry, when the consumption or wearing out of stocks, coupled with the checking of supply, forces prices up

again. It is helped by the fact that people, being unable during the depression to live on income, draw on savings and investments; their savings being withdrawn from production, production is checked still further, and the rise in prices accelerated in consequence. Or production may be reduced by the weaker firms in each trade being unable to carry on business.

Importance of Price. — This suggested explanation has been given more or less in the terms of the market; to relate it to the sketch of industry given in the last chapter, it is necessary to eliminate the references to purchase, sale, and price, and to think of the transactions as exchanges of goods and services between groups of specialized producers—an aspect of them which the use of money as a medium of exchange conceals. From this point of view we should say that producers can always find consumers who will give them something in exchange for their products, but producer and consumer cannot always agree on the terms of the exchange. The regular process of exchange is checked because the exchangers cannot come to terms; and exchange being checked, the production of wealth for exchange is checked. In a simple community the terms of exchange can be settled before production is commenced, and much production is not for exchange at all; hence there need be no misdirected production, and no overproduction with consequent unemployment. In the complex modern community production has to be commenced long before the final exchange of products can be negotiated; if the terms of exchange (the prices realized) disappoint anticipations, so that the organizers of production receive less in exchange for their products than they have expended in producing them, they will suspend or restrict production till they can get the terms they want.

Physical Causes. — W. S. Jevons suggested another explanation for these fluctuations in trade. He observed that trade depressions recurred at fairly regular intervals; he observed also that the spots on the sun reached their maximum at about the same interval. His theory is that the initial cause of the depressions was a falling off in harvests, especially in tropical harvests, due to the falling off in the light and heat of the sun. Probably the physical cause contributes to the fluctuations; it is hardly enough to account for them altogether, even if the statistical basis for the conclusion were adequate. Especially it does not explain why most trades are affected simultaneously; the influence of a failure of tropical harvests would take some years to permeate industry.

Credit and Speculation.—Two factors in the modern industrial organization may accentuate booms and depressions — the credit system and what we have called illegitimate speculation. The place of credit in the organization of production has been described in Chapter X. It is the chief source of the elasticity, the responsiveness to demand, of the modern productive organization. In a time of optimism banks and allied agencies give credit easily to business men, and so enable them to increase the amount of their business and to offer higher prices; in times of waning confidence banks, by restricting advances, deprive business men of an aid that is essential if they are to carry on business on their usual scale, and they depress prices. A sudden restriction of credit may even drive some firms into bankruptcy, and so shake confidence that not merely financial depression, but general industrial depression ensues. Probably no class therefore can do so much to exaggerate trade fluctuations as the bankers; a cautious and conservative policy in the giving of credit is essential to the stability not only of the banks and their allies, but of the whole industrial community. The present economic system is, in fact, *too* responsive to demand. The influence of the other factor, illegitimate speculation, will be inferred from what was said of it in Chapter IV. The honest dealer makes mistakes, and every mistake tends to accentuate price-fluctuations. The dishonest dealer,

who produces artificial price-fluctuations, does still more to accentuate them. The dealer, who deals on inadequate capital and makes a mistake, involves others in his ruin. The outsider, ignorant of the market and the material dealt in, is much more likely to make mistakes than the professional dealer. Every kind of illegitimate speculation tends to accentuate price-fluctuations, and therefore to make more difficult the task of anticipating demand and adjusting supply to it.

The recurrence of overproduction, however, is connected with the fundamental principle of the present system of production, specialization, with its outcome, production in anticipation of demand. It is the great weakness of the system, as a productive organization, and its results are a heavy price to pay even for the wealth which specialization enables society to produce. The loss and suffering caused by trade-fluctuations are largely concentrated on the poor, and the sense of helplessness which unemployment brings to a man is an affliction of the spirit even heavier than the material loss that accompanies it.

CHAPTER XIV

VALUE

I

Value and Price

Meaning of Value. — The general reader who opens a book on Economics is often puzzled by the great amount of space given to the Theory of Value. The reason is that the value of a thing is the rate at which it exchanges for other things, and in modern economic society almost all production is for exchange. The word "value" is in some respects an unfortunate term, since it is ambiguous. Take a few examples of its use — "the value of diamonds," "the value of bread," "the value of a kitchen garden," "the value of prayer." Obviously it is not used in quite the same sense in all these examples. Yet, there must be some common meaning in the different cases, or the same word would not be used. If we try to say what this common fundamental meaning is, we probably express it best by the word "usefulness"; we attribute "value" to anything that has a use, anything that can satisfy a human want. But that is not the commonest sense in which we use the word. If we point to a house and ask its value, the answer we get will be given in dollars and cents, and the commonest of all the senses in which the word "value" is used is to denote the rate at which things exchange. It is in this sense that it is used in Economics; a theory of value is an explanation

of the rates at which things exchange. Adam Smith distinguished between the two chief senses of the word by the phrases "Value in Use" and "Value in Exchange"; modern economists use the word "Utility" to denote Value in Use, and keep the word "Value" for "Value in Exchange."

Money as Measure of Value.—Now the exchanges in which we are constantly engaged are not usually direct exchanges of goods for goods or services for services or goods for services—usually they take place through the medium of money. Since most exchanges are made in this way through money, money comes to be a general common standard of exchange rates, since everything is at some time or other exchanged for money; the amount of money for which it is exchanged becomes an indication of its value when compared with other things. Value is a ratio; for the sake of convenience the values of other things are expressed as ratios to money; consequently we speak and think usually not of values but of prices, the price of a thing being the amount of money for which a thing exchanges. There are certain advantages, however, in keeping to the term "value" in examining the principles of exchange. We do not speak of a thing having a price unless it is for sale; anything may be said to have a value whether it be for sale or not. Again, we feel that the price of a thing does not always represent its value. In the case of sale by a trick, or when one of the parties to a sale is under the influence of drink, price and value do not coincide; such a phrase as "good value for money" is meaningless if price and value are necessarily the same thing. Such considerations are not important, prices are fairly representative of values at any given time; but when we compare one time with another, for reasons explained in Chapter XI, a change in price is no evidence of change in value.

Value and Price. — This possession of a general common measure of values in money is an enormous help in studying them. At first sight it might seem impossible to compare the values of such different things as a surgeon's skill, an ounce of tobacco, a preacher's eloquence, and a loaf of bread; yet, as a matter of fact, we do compare them. They are compared and measured and priced; and if we are rational beings, they are priced on some principle, their values are not fortuitous. Their qualitative differences are reduced to quantitative differences; our individual estimates, our motives, are measured by the price we are willing to give for each. Moreover, if we can take prices as representative of values, we have got facts to start with. "A price is a fact. A value is an estimate of what a price *ought* to be" (Hadley). The price of a thing is a known thing, the same for every one — there can be no dispute about it; the value of the same thing might be estimated differently by different people, their estimates varying with their moral and intellectual standards.

Again, though prices are somehow or other the outcome of our estimates of the relative importance of things, they undoubtedly react strongly on our estimates. We are so used to associating high price with high quality that we sometimes refuse a *good* thing because its price is low. Furniture, clothes, hotels, and entertainments are often deliberately made expensive in order to attract a certain class of buyer whose only criterion of quality is price. Especially does price influence social judgments: in England and America a man's social rank is determined chiefly by his price or "income." The usage of ordinary speech convicts us of this snobbishness, since we say a man with an income of $50,000 a year is "worth" $50,000 a year though morally he may be "worthless."

Prices then roughly measure values for us, but in making our study of the causes which settle the rates at which things exchange for one another, we prefer the wider term "value" to the narrower term "price"; we aim at formulating "a theory of value," "a theory of prices" being quite another thing.

What is the explanation of existing values? why is a woolen shirt worth twice as much as a cotton shirt? — questions such as these constitute the Problem of Value.

II

The Labor Theory of Value

Theories of Value. — There have been three theories of value of historical importance — the Labor Theory, the Cost of Production Theory, and the Marginal Utility Theory. The three theories have a common starting-point; they agree, to quote Mill, that "the temporary or market value of a thing depends on the demand and supply; rising as the demand rises and falling as the supply rises." But, Mill goes on, "besides their temporary value, things have also a permanent value, or as it may be called a Natural Value, to which the market value, after every variation, always tends to return; and the oscillations compensate for one another, so that, on the average, commodities exchange at about their natural value." It is about this permanent, normal, or natural value that the theories differ. In this chapter we shall be concerned with the first two theories, which approach the problem from the side of supply, in the next with the Marginal Utility Theory, which approaches it from the side of demand.

Statement of Labor Theory. — The chief exponents of the Labor Theory are Adam Smith, Ricardo, and Karl Marx. They hold that the value of a thing, in the long run, depends on the amount of labor embodied in it. "It is natural," says Adam Smith, "that what is usually the produce of two days' labor or two hours' labor should be worth double what is usually the produce of one day's or one hour's labor." Ricardo speaks of labor "as being the foundation of all value, and the relative quantity of labor as almost exclusively determining the relative value of commodities." Marx puts the same simple theory in more difficult language; when we have abstracted all the individual qualities and properties from commodities, " the residue . . .," he says, " consists of the same unsubstantial reality in each, a mere congelation of homogeneous human labor, of labor power expended without regard to the mode of its expenditure. . . . When looked at as crystals of this social substance common to them all (commodities) are — Values." Elsewhere he says " the value of a commodity is determined by the quantity of labor expended during its production."

Utility under Labor Theory. — The holders of this theory recognize that a commodity must have utility, or use-value, to possess exchange-value, but they cannot see that the utility of a commodity has anything to do with fixing the amount of its exchange-value. Adam Smith points out — the paradox of value — that goods with the greatest use-value have often a low exchange-value, while such things as diamonds with a high exchange-value have only a low use-value; while Marx thinks that because the utilities of different commodities are different we cannot look to utility for a standard or basis of comparison for goods of different values. " As use-values," he says, " commodities are, above all, of different qualities, but as exchange-values they are merely different quantities, and consequently do not contain an atom of use-value." The theory allows also for the use of capital: machines and other forms of capital are " saved up labor " which is passed on to, and helps to determine the value of, the goods in the manufacture of which they are used. The greater influence which Smith and Ricardo allow to capital distinguishes their theory of value from that of Marx, and makes it approximate to the Cost of Production Theory.

Difficulties of Labor Theory. — There is undoubtedly a general correspondence between the amount of labor required to make a thing and its value, and competition among sellers tends to beat down value to cost of production, which, on the view of capital given above, is equivalent to the cost in labor. When an invention " saves labor " in the making of a thing, the thing's value usually falls. The theory is attractive also, because it seems just that the value of a thing should be fixed by the trouble or labor involved in making it. There are, however, great difficulties in the way of accepting the theory *as an explanation of existing values*, and its simplicity disappears on closer examination. The chief difficulties are difficulties also of the Cost of Production Theory, and had better be deferred until that theory has been stated; there is, however, one difficulty peculiar to the Labor Theory, namely, the meaning of the phrase " amount of Labor "; that we will deal with now.

What Is Labor? — Like so many of the terms which Economics has to take from ordinary speech, " Labor " has no single, definite, well-understood meaning. Do the upholders of the Labor Theory mean by " Labor " only manual labor? The use to which the theory is sometimes put implies as much. If so, they are ignoring the labors of organizer and inventor, which undoubtedly play a great part in the fixing of values. Again, within the province of manual labor, how do they compare skilled and unskilled labor? To what common measure do they reduce kinds of labor so different as the navvy's, the spinner's, the molder's, the grinder's? In the case of the same kind of labor, what do they take as their standard? — for labor is not usually performed with equal efficiency by different laborers; often the most valuable things, especially in art and handicrafts, are made with least labor, since they are the work of workmen of special talent or genius, and in every trade the best workman is the man who can effect most with least effort — just as that batsman usually makes the longest hits whose strokes are least labored.

Explaining the Difficulties. — The writers we have quoted are conscious of these difficulties and attempt to meet them. "It is not very easy," says Smith, "to find any accurate measure either of hardship or ingenuity. In exchanging indeed the different productions of different sorts of labor for one another, some allowance is commonly made for both. It is adjusted, however, not by any accurate measure but by the higgling and bargaining of the market according to that sort of rough equality which, though not exact, is sufficient for carrying on the business of common life." Thus, though the value of a thing depends on the amount of labor in it, the amount of labor with which we must credit it is settled by the higgling of the market, in other words, by our old friend Supply and Demand. Ricardo ignores the difficulty. "The estimation," he says, "in which different qualities of labor are held comes soon to be adjusted in the market with sufficient precision for all practical purposes, and depends much on the practical skill of the laborer, and intensity of the labor performed. The scale, when once formed, is liable to little variation" — which is true, but does not explain which kind of labor he means when he speaks of the "amount of labor" determining value.

The Marxian. — Marx tries several explanations. At one time he says: "The quantity of labor however is measured by its duration, and labor time in its turn finds its standard in weeks, days, and hours" — which, if true, would make it profitable to employ unskillful workers, since by taking longer over their work they would produce more value. In another place he takes unskilled labor as his standard: "We shall henceforth account every kind of labor to be unskilled, simple labor"; in another place "average" labor: "The labor time socially necessary is that required to produce an article under the normal condition of production, and with the average degree of skill and intensity prevalent at the time" — *i.e.* the length of time actually spent by the laborer in producing an article has nothing to do with its value — its

value depends on the amount of "socially necessary labor" that the worker succeeded in putting into it. Finally Marx adopts "simple, abstract human labor" or "socially necessary labor" as his standard. He is not, however, any more successful than Adam Smith in explaining why we must credit an hour's work of a cotton spinner with two and a half times as much "socially necessary labor" as an hour's work of a farm laborer; all he can say is that "the different proportions in which different sorts of labor are reduced to unskilled labor as their standard, are established by a process that goes on behind the backs of the producers, and consequently appears to be fixed by custom." This is no reason why it should "go on behind the backs of" economic students. What this unseen process is, is indicated by Mr. Hyndman, Marx's chief English exponent, who says: "The quantity of labor incorporated is determined not actually, but relatively in equivalence with definite quantities of other commodities. This equivalence and therefore the social minimum of time required for production being determined by competition and the higgling of the market."

Circular Reasoning. — The argument, though a little more roundabout, has brought us to the same goal as Adam Smith's argument: value depends on the amount of socially necessary labor in a thing, but the amount of socially necessary labor in a thing can only be settled by bringing the thing into the market and seeing for how much of other things it will exchange; but the rate at which it exchanges for other things is its value, so that all the argument has proved is that Value depends on Value. There is no unit or measure of labor which we can use as a standard of value; "simple abstract human labor" is a perfectly justifiable concept, but then so also is "simple abstract human utility." There is no greater difference in kind or quality between the utility of a table and the utility of a tea-pot than there is between the labor of a cabinet-maker and the labor of a potter. To say that labor is a very important element in the influences that fix values is true and important, but to exclude all other influences and attempt to make labor a standard of value leads inevitably to argument in a circle.

III

The Cost of Production Theory of Value

Explanation. — The other explanation of value that approaches the problem from the side of supply is the Cost of Production Theory. It differs from the Labor Theory only in allowing for other elements besides labor in the cost of producing a thing, especially in allowing for profits, the remuneration of the capitalist. "The cost of production," to quote Mill again, "together with the ordinary profits, may be called the necessary price or value of all things made by labor and capital." This conclusion is reached by observing the effects of competition: if the value of a thing rises above its cost of production, its makers receive more than the average rate of profit, high profits attract more labor and capital into the trade, and the competition among sellers to sell the increased supply brings the value of the thing down; if the value of a thing falls below its cost of production, some of its makers reduce their production, or leave the trade, so that the supply is reduced, and buyers competing for the reduced supply force the value up again. In certain cases cost of production varies from producer to producer—owing, for instance, to variation in the fertility of land or in proximity to markets; to meet such cases the rule was restated, and value said to depend on "cost of production under the most disadvantageous existing circumstances." The amount of a crop that society wants cannot be supplied from the best land alone; inferior land has to be brought under cultivation. The cost of production on the inferior land is greater than on the good land; society has to pay a price high enough to cover this higher cost of production, or it will not be able to get as much as it wants, and all the producers are able to get this price.

Difficulties. — Whichever form a theory takes that attempts to explain value from the side of supply, it has certain difficulties to face. First of all it ignores the possibility of misdirected labor. Labor and the other elements in the cost of production are constantly being applied to the production of commodities that possess, when made, little or no utility; a large part of the organization of production is concerned solely with facing and averting this danger, and, as we have seen, failure is frequent. The cost of production of a suit that, when finished, does not fit, has nothing whatever to do with its value. In the fifties some of the Western States began the construction of railways. The embankments were built, but that is about as far as the railways got. The cost of production of these railway embankments ran up into the thousands; their value was nothing. It is no answer to this difficulty to say, as Marx says, that the labor embodied in products of no utility "does not count"; cost of production cannot be recovered if the thing produced turns out to be useless. What has cost of production to do with the values of summer hats at the end of the summer season, or of winter fashions at the spring sales? If it be urged that such cases are abnormal, one can only reply that they are of everyday occurrence. A country in which the cost of production invariably fixed the value of a thing would be a business man's paradise, because he would never be punished for his mistakes; we ignore half our problem if we take utility for granted.

Difficulty with Value Changes. — Similarly this group of theories does not explain changes in the value of a thing *after* it is made. Cost of production, whether measured in labor alone or not, is something settled and definite once a thing is produced — it belongs to the past and cannot be changed; but values do change. So far as there is change in methods of production, it may be said that the cost of production, or the socially necessary labor embodied in a thing, can change even after the thing has been completed; but values change when there has been no change in methods of production. A death in the royal family will destroy the value, for that season at any rate, of whole stocks of dress goods; house property declines in value in a "decayed" neighborhood without any change in the methods of building houses: the gross annual value of lands in England (as returned under Schedule A of the Income Tax) fell from forty-eight and a half million pounds in 1879 to thirty-seven million pounds in 1893. Similarly values rise irrespective of cost of production. Building sites in great towns are the most obvious case, shares in successful corporations are another — the value of a company's buildings, plant, and materials depends not at all on their cost of production, but on the demand for the goods which the company makes. Such cases are far too numerous to be dismissed as "exceptions" or with the statement that "in the long run" cost of production determines value.

Unreproduceable Goods. — Still less will any Cost of Production Theory explain the "scarcity" values of works of art, favorable building sites, exceptional ability, etc. What of "dumped" goods? Dumping is merely the application of the principle of spring sales to foreign trade. How, again, can railway rates be explained on the Cost of Production Theory? The conclusion to which a study of Cost of Production theories of value leads us is that demand and utility, somehow or other, play a very important part in fixing values; where value and cost of production or amount of labor do correspond, it would be just as true to say that the value of the thing decided how much labor, etc., shall be devoted to producing it, as to say that the amount of labor, etc., fixed its value.

Actual Business Calculations. — An analysis of the action of the seller will lead us to the same conclusion. How does the business man settle the price which he charges for his goods? On what does the price he charges us depend? Can he charge anything he likes? Does he, as a matter of fact, fix his price by calculating the total cost of production and then adding, say, 10 per cent for his profit?

If the business man is not one of the leading men in the trade, if he cannot know with accuracy what the demand for his goods will be, or if he is doubtful about selling them at all, he probably will calculate the cost of them to himself, add something for his profit, and put them on the market at the resulting price. He will reason that his competitors will have costs of production about the same as his own, that they will want the same profit, and that they will be willing to sell at this price if he is not; at the same time he cannot afford to take a lower price, even if some of his competitors, with lower costs of production or a bigger turnover, can afford to. Taking business as a whole, however, this is not the invariable procedure. In retail trade stocks have sometimes to be cleared by "sales" for what they will fetch, or "leading lines" will be sold below full cost to attract customers; in wholesale trade goods are often sold below full cost if the seller cannot sell them at any better price.

Various Interpretations of Cost of Production. — Cost of production is a term that will bear more than one interpretation. A manufacturer will not sell below *prime cost* unless he is forced to realize some of his property by some sudden need for cash; but he will often sell goods at a price that, after covering prime cost, makes only a small contribution to his standing expenses rather than let his works stand idle or allow competitors to cut into his market. Further, cost of production per unit varies with output: a producer will often quote a price for a large order below his present cost of production, because he calculates that on the larger output his cost of production per unit will be smaller. Apart from this consideration, cost of production varies from firm to firm, from district to district: the efficient producer, who by successful organization can produce cheaper than his competitors, will not hand over the whole of his savings to the consumer in reduced prices — he will charge the highest price that the competition of other sellers will allow him to, and cheerfully pocket the big margin between cost of production and price that his cheap production leaves him.

Difficulty of Calculating Costs. — Again, there are cases where the exact cost of production of any single piece of work cannot be calculated. The cost of running an extra excursion train on a railway, the cost of taking a return freight on a steamer that would otherwise have had to return in ballast, the cost to the doctor, lawyer, or stockbroker of any extra professional services, are cases in which prime cost can be calculated but total cost or real cost cannot: the railway has to be built and staffed to run even a single excursion train, the fares of the excursion ought to contribute to the expense of building and staffing it, yet all that expense would have been incurred even if that particular excursion train had not been run; the steamer had to be built and equipped before it could undertake any freight at all, and every freight it takes ought to contribute to the cost of building and equipping it, yet the steamer was coming home without the return freight if it had not got it; the professional man must have had his expensive training before he can undertake any professional services at all, yet once he has got the training an additional professional service makes practically no difference to his expenses. In such cases, then, the only possible principle on which the seller can proceed in fixing rates and prices is the railway company's principle of "charging what the traffic will bear."

Cost as a Minimum Price. — Those producers who have

any influence on the fixing of price usually do one of three things. First, they may work to order: a customer offers to take a certain quantity at a certain price; the producer finds that his cost of production for that quantity is less than this price, and takes the order; he does not tell his customer what his cost of production is — though he often tells him that the things "cannot be produced at the price." Or secondly, if the producer is not working to order, having made or arranged to make a certain quantity, he fixes the highest price for it that he thinks he can get — subsequently raising or lowering it according to the state in which he finds the market, perhaps also varying his price from customer to customer so far as he can do so without being found out; the farmer, who has not complete control over the quantity of his output, has to adopt this procedure. Or thirdly, the producer may fix the price of his article first, and then make as much of it as he thinks will sell at the price; a publisher for instance, having decided to publish a book in a certain form at $1.50, has to decide whether he will publish an edition of one thousand, five thousand, or whatever other number is usual. But whichever of these three courses the producer adopts, there is one rule that, so far as he is influenced by business motives, he invariably obeys: he gets what he can, he acts on the railway company's principle and "charges what the traffic will bear." The only difference between the railway company and most other producers is that other producers can estimate much more exactly than the railway company can what is the true and full cost of each piece of work, and they are much more subject to competition. They do not, however, on that account fix their charges at cost of production; they calculate cost of production carefully and take it as a minimum below which they will not let prices fall, and the competition of other sellers usually keeps them somewhere near that minimum; but they get the highest price they can.

Importance of Leading Firms. — It is only the leading men of each trade who have much to do with the fixing of prices; the great majority of sellers have to take prices for granted, producing as cheaply as they can and selling at the market price. In many industries, especially at the retailing end, there are traditional or customary prices, and what producers do is to vary the quality of the article which they will supply at the customary price — which comes to the same thing as varying the price of an article of standard or customary quality — or else they vary the quantity they will produce at the price; in these variations, however, a few usually lead, the rank and file of the trade follows.

IV

Decreasing, Increasing, and Constant Cost

Our analysis of the action of the seller, then, supports the conclusion of our previous argument, namely, that value cannot be explained from the side of supply alone. It also forces on our attention another consideration. The phrase "Cost of Production" — like the word "Labor" — conceals more difficulties than it explains. It is constantly used as if costs of production were always simple, fixed, and easily ascertained. This may have been the case once, but it is so no longer. Since the cost of production of anything is the chief element in determining its supply, we must try to get clear to ourselves the meaning of the phrase.

Elements Entering into Costs. — Let us consider the elements in the cost of production as they present themselves to a modern manufacturer, and then consider the effects of a change in the volume of output. The first element is the cost of material; this can usually be ascertained with accuracy, though even here if many different materials are combined in the finished product the task is not easy. Next there is the cost of labor; a large part of workshop management consists in devising means for ascertaining exactly what expenditure in wages is incurred on each piece of work done, and, if the commodity in its making passes through a great many hands, the task is very complicated. If we add to materials and labor any other expense that can be definitely attributed to the given piece of work, we have what has been called the "Prime Cost" of its production. Prime Cost, however, is never the total cost, and is often only a small part of the total cost of producing a commodity. Certain "Supplementary" or "General" or "Overhead" Expenses must be incurred to make it possible for the commodity to be produced. The firm must be organized, foremen and managers paid, whether much work or little is being done. Rent and wear and tear of buildings and machinery, the expense of the power plant, insurance against fire and accident, taxes, are all necessary expenses, but none of them can be allocated to any particular unit of the whole output; office expenses and the expenses of the selling organization are largely independent of the amount of work done. Thus we have to include in the full cost of production of each article produced not only the cost of material and labor, but a proportion also of the general expenses of the firm, and that proportion will vary with the number of articles produced. In most big manufacturing firms the estimation of the cost of production requires the whole time of a specialized "costs" department.

Similarly if we wish to arrive at the exact expense to society of the production of any commodity, we have to add together its Prime Cost of Production to each of the firms that handle it, a proportion of their General Expenses, the Prime Cost of transporting it and the materials of which it is made, and a proportion of the General Expenses of the different transport agencies, and a proportion of the expenses of all the merchants, bankers, shopkeepers, and others who assisted in the collection, forwarding, and exchange of the materials and finished commodity. Dentists in presenting their accounts to clients, after stating the total amount of their charge, sometimes add, "Details if required"; if we were to ask for the details of all the payments for labor, materials, etc., that make up the $2.50 we were charged for our woolen shirt, we should be setting accountants a complicated task to perform.

Possible Cost Movements: Diminishing Costs. — Bearing in mind the distinction between Prime Cost and Total Cost, we will examine the effect on Cost of Production of increasing the volume of production. There are three possible effects: the cost per unit may decrease, increase, or remain constant. In industry an increase in the volume of production (whether in the single firm or in the trade) usually brings with it a decreased cost of production per unit. There are two reasons for this. The first is that an increase in the volume of work makes it possible to carry specialization further — labor, machines, management can all be specialized further in the firm, while in the trade transport and marketing facilities can be specialized further, and subsidiary industries developed. The decrease in cost per unit owing to this cause will not be regular or continuous; the cost will come down in steps, as it were, a drop taking place when a new machine, a new system of workshop organization, a new method of distribution, or a new use for a by-product becomes practicable. And the decrease has a limit; in the firm it is limited by the ability of the management; in the trade it is liable to be counteracted by increasing cost of raw material. The other reason for the decrease in cost that comes with an increased output is that the general, standing, or overhead expenses can be spread over a greater number of units of product.

Increasing Costs. — In the extractive industries — agriculture, mining, and fisheries — an increased output cannot usually be obtained at a decreased cost per unit, unless some improvement in methods of production is discovered. The two economies we have described do not operate so strongly as in industry, and are liable to be counteracted by the niggardliness of nature. The most convenient or fruitful lands are naturally occupied first, and if an increased supply is wanted, recourse must be had to inferior or less convenient soils. If the attempt is made to raise more by putting more work or capital into the land, the additional product will be raised only at an increased cost, so long as technical science remains the same; if we could always double the produce of our land by doubling our expenditure on it, we could raise all the food of the country on a single acre of land by doubling often enough. We do not feel the effects of this niggardliness of nature only because invention is constantly postponing its pressure. In some industries also increased supply can be secured only at increasing cost; in telephone service, for instance, an increased number of subscribers brings with it a more than proportionate increase in the complexity of the organization, and consequently in the cost of working. Transport in great centers of population has often, though for different reasons, to face the same difficulty.

Constant Costs. — The third case, the case of *constant cost*, will occur when the influences making for economy are just counterbalanced by the difficulty of getting more raw material or by the increasing complexity of the business. It is also the rule with simple handicrafts, in which general expenses are unimportant. When handicraft was the rule, labor was the only important cost in production, and, since methods of industry and demand changed only slowly, the most important influence in fixing values.

Complicated Nature of Costs. — Costs of production, then, are neither simple nor fixed; our examination of them will help us to understand the influence of cost of production on value. The distinction between Prime Cost and Total Cost explains why producers are often willing to sell a portion of their output at a price which does not cover the total cost of production. A heavy-steel works, for instance, has very high fixed expenses; if it can recover the greater part of these fixed expenses by selling a portion of its output at a high price (for instance in a protected market), it will pay it to sell the rest of its output for a price much below its total cost of production, provided the price covers the prime cost, rather than not sell it at all. In times of trade depression it may lose less by selling its whole output at less than total cost of production, provided the price more than covers prime costs, than by letting its works lie idle; in cases where the standing expenses bear a high proportion to the prime costs, selling at a loss in this way may go on for years. In some industries the Prime Cost of any single commodity or service is so small in proportion to the Total Cost that cost of production affords no help at all to an understanding of the price charged. Such is the case with railways, water works and, in a less degree, gas works. In each case an enormously expensive plant has to be kept in working order, and interest earned on the cost of it, whether much or little business is done. In the case of railways the cost of constructing the system is as much as ten times the annual receipts, and of the annual expenses 80 per cent have to be incurred independently of the amount of traffic. Under such circumstances it is impossible even for the management to say with any accuracy what is the true cost of running a particular train or carrying a particular consignment of goods; the fuel, wear and tear and wages can be calculated; beyond that, any estimate of cost must be more or less arbitrary. The prime cost is the only additional expense to the company for which this particular piece of work is responsible, but on its traffic as a whole the company has to charge fixed expenses amounting to 80 per cent of its whole expenses, and in addition any interest paid on the capital invested in the railway.

The consideration that there are usually different costs of production (per unit) for different amounts of a commodity is even more important. It helps us to understand the constant movement of prices. If a single manufacturer in a trade in which decreasing cost is the rule lowers prices, the rest must follow suit; the lower price at which he offers the goods would otherwise attract his competitors' customers to him, and he can make a profit at the lower price since his larger output enables him to produce cheaper. As soon, however, as the available supply of raw material falls short, and — failing new inventions — the industry has to resort to less productive sources of raw material, the price has to go up, or the producers will not be able to keep their businesses going.

When, therefore, we speak of supply, we must be quite clear whether we are dealing with a period long enough to give the supplying industry time to expand or contract, or a shorter period. Over the long period Total Cost is the important influence in fixing the amount of supply, over the shorter period Prime Cost is the important influence. We must be quite clear also that the word supply means a quantity at a price; at *different* prices different amounts can be supplied by a producer or a trade without loss. It is theoretically possible to construct a supply schedule, giving the amount that can be supplied at each of a series of prices, or, what is the same thing, the prices at which each of a series of amounts can be supplied. Such a schedule would give us the prices or values towards which competition between sellers is constantly tending to drive commodities.

V

Influence of Competition and Monopoly on Value

Possible and Actual Supply. — A consideration of cost of production does not, however, exhaust the influences affecting value on the side of supply. There is an ambiguity in the word "supply." By the supply of a commodity may be meant either of two things: the amount that *could* be brought to market, or the amount that *is* brought to market; the amount that *could be* offered for sale or the amount that *is* offered for sale. Now the "supply" which will fix, or help to fix, the value of the thing is the amount that *is* offered; while the "supply" which is determined by the cost of production is the amount which *could* be offered. The two amounts do not necessarily coincide; whether they do or do not, depends on the control of the product, or, in other words, on the extent to which competition between producers is operative. In considering, therefore, the influence of "supply" in fixing values, the conditions of control are as important as the conditions of production; the conditions of production, as we have just seen, fix the cost of production, but the conditions of control fix the amount actually offered for sale.

Monopoly Control. — The two extreme conditions of control are complete monopoly and complete freedom of competition among sellers. The monopolist will work out the different costs of production for different amounts; he will estimate the demand at different prices; he will then put on the market that amount which will afford him the greatest difference between total costs and total receipts. If — as would probably be the case in an industry subject to decreasing cost — a small profit per unit on a large sale will give him a bigger total profit than a large profit per unit on a small sale, he will sell at the low price; if — as would probably be the case in an industry subject to increasing cost — a large profit per unit on a small sale would give the biggest total profit, he will limit his output. The amount that is put on the market will probably not be the amount that could be put on the market, and the price or value of the commodity will bear no definite relation to its cost of production. The profits of monopoly consist of this margin between cost of production and sale price, which the monopolist is able to secure by his control of the supply.

Free Competition. — At the other extreme, under perfectly free competition, the amount that is offered will probably be the whole amount that could be offered, and the value of the thing will keep pretty close to its cost of production. There is no single agent controlling supply and able to restrict it, however much higher the price that could be obtained for a restricted supply. The producers, competing to sell, will none of them know exactly how much their competitors are putting on the market, and will hesitate to withhold a portion of their output, even if they think that the market is in danger of being glutted, for fear that their competitors will glut the market if they do not. They will none of them know what price their competitors will hold out for, and will therefore offer their product as near cost price as they can, for fear that their customer will take his custom elsewhere. We saw, when we were studying the meaning of competition, that the essence of it was the possession of an alternative and the exercise of choice by one party to the contract of sale; monopoly is the abolition of the alternative and power of choice.

Normal Situation. — Under free competition, then, the value of a thing will tend to coincide with its cost of production, and it has been usual to take this as the normal case. It would be just as reasonable to take monopoly as the normal case. Perfectly free competition is as rare as complete monopoly; most actual cases in industry and commerce fall between the two extremes. One of the chief aims of business men is to introduce some element of monopoly into their business, to impose some restriction on competition. Competition presses on them like a head of water, forcing down the price of their product towards its cost of production; any restriction they can impose on competition is a break-water, holding back the pressure and enabling them to maintain an additional margin of profit between market value and cost of production. Further consideration of this must be postponed to the chapter on Profits; it is sufficient here to note that perfectly free competition among producers is the exception, not the rule, and wherever there is any restriction placed on competition among sellers, there is no surety that value will correspond with cost of production.

Value Implied in Cost of Production.—There is one further obstacle to basing an explanation of values on the cost of production. The cost of production is itself reached by adding together a number of values; it cannot determine value, since it is itself determined by value. The value of a manufactured article cannot be explained by its cost of production, because its cost of production depends on the values of the materials of which it is made, the value of the machinery used to make it, and the value of the time and energy spent by different workers upon it. To say that value in general depends on the cost of production is to say merely that one value depends on other values, which depend again on other values, and so on in a circle. The circle, however, can be broken and the obstacle overcome — at the sacrifice of the simplicity and definiteness of the theory — by drawing a distinction between the *expenses of production*, which is what we have understood by cost of production hitherto, and the *real cost of production*, understanding by the real cost all the human efforts and sacrifices required to produce a commodity. The attraction of the Labor Theory lies in the fact that it bases value on the human effort required to give value to anything, and so explains value in terms of human life.

Sacrifice as Cost. — The Cost of Production Theory, however, brings out another element in real cost. Labor without the aid of the saved up products of previous labor is comparatively unproductive; this "saving up" of wealth to aid further production does not go on without some inducement, since most people prefer spending to saving. We may say, then, that saving involves a sacrifice of sorts, which is just as much a necessary element in the real cost of production as is the effort of labor. Senior called this sacrifice "abstinence"; since the growth of great fortunes has made the term "abstinence" ridiculous, Dr. Marshall calls it "waiting." The sacrifice of the person who saves will seem negligible to the person who has to contribute to production the effort of labor, and quite rightly so; still, under a system of private property, it has to be paid for, and the value of a thing must be big enough to induce the saving as well as the labor needed to produce it, or it will not be forthcoming. Hence in the real cost of production we must include all the efforts and sacrifices needed to produce a thing.

This analysis of the meaning of "cost of production" and "supply" does not alter the fact that values cannot be explained by a consideration of the conditions of supply alone; it should, however, help us to understand the influences on the side of supply which help to fix values. We have now to study demand.

CHAPTER XV

VALUE (*Continued*)

I

Relation of Utility to Value

The Consumer's Viewpoint. — In the previous chapter we saw that value cannot be explained from the side of supply alone. An analysis of the action of sellers showed that they invariably (so far as they are influenced by business motives) act on the railway company's principle of "charging what the traffic will bear," of getting as good a price as they can from the buyer. How much then can the seller get? He can get just what the consumer will give. How much at a given price can the producer sell? He can sell just as much as the consumer will take at that price. The consumer has the deciding voice; if he will not take the thing, he will not, and the producer, who has produced his things to sell, has them left on his hands. We have got to ask then what decides how much the consumer will pay, or how much he will take at a given price.

Utility. — The answer seems simple; the consumer will pay just as much, having regard to his income, as he thinks the thing is worth to him; nothing can make him pay more, and it is the seller's business to see that he does not pay less. The consumer buys things because they satisfy his wants; he pays $2.50 for a woolen shirt because he thinks that he cannot get more satisfaction, a better $2.50's worth, by buying anything else at the time. So the price which

the producer can get for an article depends on the satisfaction which the seller thinks he can get from the article, in other words, on the utility of the article. The producer, in fixing the price at which he will sell his product, or in fixing the amount which he will sell at a given price, is simply engaged in estimating (unconsciously of course) the utility of his product to the consuming public. He is not quite restricted to the task of estimating utility, he can do something to influence the consumer's opinion of utility; we said that the consumer will pay just as much as he thinks the thing is worth to him, and a whole army of agents, advertisers, and others are employed in this work of influencing consumers' opinions; but ultimately things are bought because they satisfy wants; however consumers' opinions may be influenced, consumers buy things because at the time they buy them they want them.

Variability of Utility. — It seems, then, that value depends on utility; before we can accept this view as an explanation of value, we have two difficulties to overcome. The first is that the utility of a thing is different at different times and to different persons, while its value may remain the same. A loaf costs the same to the starving man, who spends his last nickel upon it, and to the dyspeptic millionaire, who could afford to give a thousand dollars for it, but will not be able to enjoy it when he gets it. The utility of a loaf is different to the two buyers, the price is the same. When we are hungry a loaf has a greater utility for us than when we are full; we do not therefore pay a higher price for it. The reason for this uniformity of price or value is that the loaf is bought in a competitive market. If sellers could charge us according to our need, they would probably do so; but there cannot be any great variations of price for the same article in the same market; if the baker tried to charge us eight cents for a five cent loaf just because we were hungry, we should go to another baker. Competition among sellers then generally insures that an article shall have one price to all buyers in spite of the different utilities it has to different buyers. A monopolist could charge different prices to different customers; wherever there is an agreement, explicit or tacit, among all the people in a trade or profession, different prices can be charged — doctors for instance make different charges for the same services according to the income and social position of their patients — but in most trades there is enough competition among sellers to insure that the price of a commodity will not vary much in the same market.

Relation between Utility and Supply. — The other difficulty is greater; so great is it that, as we have seen, the earlier economists decided that they must ignore utility in looking for the principle governing values and look exclusively to the side of supply. Utility and value seem to vary inversely with each other; commodities such as bread, air, water, with the greatest utility — or, as Adam Smith called it, value in use — have often the lowest value in exchange, and conversely commodities with the highest value in exchange, such as diamonds, rare curiosities, and pictures, seem to have little utility. The importance of the want satisfied by a commodity seems to have no influence on its value. The explanation of the difficulty lies in the fact that *the utility of the total supply of a commodity is a very different thing from the utility of a given quantity of it,* and it is the latter that we consider when we are comparing and measuring values. The entire supply of bread, water, or air is obviously of infinitely greater utility than the entire supply of diamonds or pictures; but entire supplies do not come into the market; what the consumer considers in making purchases is a little more of this or a little more of that. It is not the utility of water to us that we measure in fixing our price for it, but the utility of an extra tap in the garden or a lavatory on the ground floor; it is not the utility of bread that we measure in deciding what price we can pay, but the satisfaction to be obtained from an extra loaf a week. And it is this "little more or less," in Dr. Wicksteed's phrase, that we consider in comparing the desirability or utility of different commodities. In choosing our residence we hesitate between a little more fresh air, to be obtained by living in the country and paying railway fares to our work, and greater proximity to our work; we hesitate between an addition to our collection of books and an addition to our furniture, between an extra ounce of tobacco a week and an additional subscription to the Red Cross.

II

The Marginal Utility Theory of Value

Diminishing Utility. — It is always a little more or less, never the commodity as a whole, that we consider; more food, more house-room, more clothes, more recreation, and amusements; the poorest of us have already some food, some shelter, some clothes, some recreation. And every addition to our supply of anything gives us a smaller satisfaction than the previous addition; the more we have of a thing, the less we gain by adding to our store of it. If we already have three good meals a day, an additional meal will give us less satisfaction than the extra meal would give if we were increasing our meals from two to three; if we live in a ten-room house and move into an eleven-room house, the additional room gives less satisfaction than it would do if we were moving from a four-room house; if we already have a summer suit, winter suit, dress suit and flannels, the opportunity of getting another suit will not appeal to us as it would do to a man with only one suit at present; if we are members of ten clubs, possess three motors, a yacht, and a country house, and can take a box at the theater whenever we want to, we shall not attach the same importance to a gallery ticket admitting to a moving-picture entertainment that a working lad does with only a quarter a week pocket-money. All wants tend to satiety; if we have too much of a thing, we get, in the common phrase, "fed up." There are apparent exceptions; alcohol stimulates the appetite which it feeds, but even alcohol, if administered continuously, will sooner or later make the drinker sick. It is sometimes said that the appetite for money is insatiable; it is not; the wants that money enables us to satisfy are so many and varied that we can find a use for money almost indefinitely, but for money itself, the coins, the appetite is not insatiable except in the case of that rare person the true miser, who is significantly called "abnormal." Wants differ very much in the rate at which they become satiated; intellectual wants are usually satisfied much more slowly than physical wants; but all wants tend to satiety. If it is asked why, we can only answer that it is a fundamental fact of our human nature.

Diminishing Utility and Value. — Let us apply this "law of diminishing utility" or "satiable wants" to the fixing of values. A pound of tea a week gives us a great satisfaction, we would willingly pay $1.75 for it rather than go without it; a second pound of tea does not give us the same satisfaction, we would not give more than $1 for it; a third pound gives less satisfaction still, we would give 50 cents for it but no more. But the pounds of tea are all alike, one in itself is as good as another, the difference in the amount of satisfaction they give is due to us. Further, there cannot be two prices for the same article in a competitive market; all the pounds of tea of a given quality will have the same market value. Consequently the seller of the tea will not be able to charge us $1.75 for the first pound, $1 for the second, and 50 cents for the third; if he wishes to sell us two pounds he can charge only $1 a pound, while if he wishes to sell us three pounds he will have to reduce his price to 50 cents a pound. It is the utility of the pound of tea that we are

just induced to purchase that settles the value of tea for us; the total utility of tea has nothing to do with fixing its value, it is the utility of the little more or little less that we just find it worth while or not worth while to purchase that settles its value. To this "little more or little less" the term "marginal" has been applied, and its utility is the "marginal utility" of tea. *Market values coincide with marginal utility.*[1]

Significance of the Marginal Conception. — The importance of this theory lies in the explanation it gives us of two otherwise inexplicable facts, the fact that the things with the greatest importance to life have often the lowest market value, and the fact, recognized by every one and understood by so few, that an increase in supply brings usually a fall in value. Important things like bread have a low value because most people have plenty, and sellers can only induce us to take all they produce by putting the price low. The total utility of bread is immense, but does not affect its value; the utility of the loaves which a well-fed public are only just induced to buy is so low that the consumers will not pay more than 5 cents the loaf. The world could get on very well without any diamonds at all; yet the desire for display, which diamonds satisfy, is so far from being satisfied among the rich people who wear diamonds that they estimate at a very high value the satisfaction to be obtained from another diamond, and pay accordingly. Again, if the supply of anything is increased, the value will fall, because the additional supply satisfies a less intense want than the previous supply. Each person using or consuming the thing was already buying as much, at the old price, as the satisfaction it gave was worth to him; every one will take an additional supply (which, in accordance with the principle of diminishing utility, will give less satisfaction) only at a lower price. For each individual the market-price is a thing given and fixed, each decides how much he will buy at that price. But from the standpoint of the outside observer, the market-price itself is the result of all the individual valuations, since that price has been chosen by the sellers as being the price at which they could sell most at a profit. The price is fixed by the seller in the first instance, but in fixing the price he is unconsciously estimating the marginal utility of his commodity to the consumers.

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[1] It should be borne in mind that there are two "margins" in economic theory; first, the margin which is the result of competition, the margin meant in such phrases as "the margin of cultivation" and "the margin of production"; and, second, the margin which is the correlative of the principle of diminishing utility, the margin referred to when the phrase "marginal purchase" is used to describe the third pound of tea a week which satisfies a want just strong enough to induce us to purchase it at 50 cents. The first is a market margin, *i.e.* it is the result of differences among a large number of individual producers who are getting the same market price for their product; the second is an individual or psychological margin, *i.e.* it is the result of the differences between the satisfactions given by successive pounds of the same tea. The two "margins" are often confused; the marginal utility theory of value is concerned solely with the second.

Derived Value. — A great part of the wealth of a modern community consists of machines and other aids to production which satisfy no want directly. Their value is *derived* from the value of the goods ready for consumption which they help to produce. If the demand for their products goes up, their value will rise with the value of their products; if the supply of their products is increased, without any corresponding increase in the demand, their value will fall with the value of the products. Similarly the value of labor and of land are "derived" from the value of the goods they produce.

Historical Background of Value Theories. — The three historical theories of value reflect the conditions of industry at the times they were formulated. The Labor Theory explained values fairly well at a time when the division of labor was simple, and there was little power machinery and little trade; manual labor was the only important element in the

cost of production, and in the narrow markets for which the laborer worked "allowance" was easily made for "hardship and ingenuity." When methods of production became more complicated, especially by the extensive use of power-machinery, it was felt that labor alone was not a sufficient explanation, and "Cost of Production" was substituted; factories were still comparatively simple and confined to a narrow range of products, the cost of which could be easily separated and computed. The typical modern firm includes many products in its output, the costs of which cannot always be analyzed and computed separately; hence "Cost of Production" is no longer an adequate explanation of values. No Cost of Production theory would ever explain why steak has a greater value than shin-beef from the same beast; to-day the commodities which are supplied jointly, like steak and shin-beef, are innumerable, and any theory of value to be any use must account for their values.

III

The Law of Supply and Demand

Our hasty survey of the chief historical theories of value has brought us back to our starting-place, supply and demand; it has not on that account been waste of time. We have learned that there is no objective standard or measure of values except money; any attempt to find an absolute standard in labor or cost of production leads to a circle in argument, for labor and all the other elements in cost of production themselves are valued and cannot therefore be used to value other things. We have also found that to ignore market values and try to find some "natural," "permanent," or "normal" value is rather a waste of time. Market values are the only values ever expressed as prices; our only facts, therefore, are facts of market values, and market values are the only values that practically affect us. We have also learned something about cost of production, and something about demand; the Marginal Utility theory is only a more exact statement of the principle that value depends on supply and demand. We are now in a position to sum up our knowledge of supply and demand, and to realize the significance of the statement that value depends on supply and demand.

Misapplication of Supply and Demand. — It was said in the middle of the last century that you could make a good economist of a parrot by teaching it to repeat the words "supply and demand"; a great many people have acted on this belief, and, having taught themselves to repeat, like parrots, the words "supply and demand," have set up for economists. In spite of frequent misuse, however, the principle that value depends on supply and demand is extremely important; a parrot that fully understood it would indeed be a good economist, but it seems to be beyond the comprehension of most parrots, human and otherwise. The principle does not mean that if we knew how much of a commodity was in existence and how much was wanted, we should be able to calculate its value; desire for a thing has no influence on its value unless it is backed by the will and ability to purchase, and the supply of it has no influence on its value unless its owner is willing to sell.

Explanation of Supply and Demand. — The supply of a thing, in the phrase "supply and demand," is the amount that will be offered for sale at each of a series of prices; the demand is the amount that will be bought at each of a series of prices. The principle that value depends on supply and demand means that in the case of nearly every commodity, more will be bought if the price is lowered, less will be bought if the price is raised. Therefore sellers, if they wish to induce buyers to take more of a commodity than they are already doing, must reduce its price; if they raise its price, they will sell less. If there is a general falling off in demand — due, say, to trade depression — sellers will either have to reduce prices or put less on the market; they will not be able to sell the same amount at the same price. Similarly with supply. At a certain price a certain amount will be offered for sale, at a higher price more will be offered, at a lower price less. If consumers want more, they must offer a higher price; if they want less, they will probably be able to force prices down. That is the first result of a change in demand or supply.

Mutual Relationship of Value and of Supply and Demand. — The statement "value depends on supply and demand," however, does not express the whole truth; it would be equally true to say "supply and demand depend on value." If there is a change in demand, sellers will increase or reduce supply to suit the demand, so that prices resume their old level; if the sellers who control the supply anticipate exactly the changes beforehand, there will be no fluctuations in the value of the commodity at all. Similarly, if sellers reduce the supply and so send the value up, the increased value will check the demand and perhaps force the sellers to reduce prices again. Supply, demand, and value depend on one another; if one changes, the other two will be affected; or a change in supply may be balanced by a change in demand, and value remain the same.

Elasticity of Supply and Demand. — In considering the supply of anything, we have to take into account the possibilities of the industry that produces it: if it is an industry in which an increased output means a decreased cost per unit, then the sellers may find themselves able to meet a bigger demand at the lower price; if, on the other hand, the commodity is one in which an increased output can be obtained only at an increased cost per unit, then the sellers may find it pays them to reduce the output and raise the price. In considering demand we must remember that, while it nearly always increases as price falls, the increase may be much or little in proportion to the fall in price; in the case of common luxuries and commodities capable of many uses, the consumption may be stimulated greatly by a small reduction in price, the demand is, in technical phraseology, "elastic"; in the case of necessities, such as bread, of which most people have as much as they want, a large reduction in price may produce a very small increase in consumption, the demand is "inelastic." The elasticity of demand is also affected by the class of consumer to which the commodity appeals.

The important influences then in determining the value of a thing are the nature of the supply of it — whether subject to increasing, decreasing, or constant cost — and the elasticity of the demand for it. Further, if we wish to get behind the actions and reactions of the market, and to state the influences that fix value in terms of human life, we shall still say that value depends on supply and demand; but just as demand depends on the power of the commodity to satisfy human wants, so supply, in its turn, depends on the true cost of production, *i.e.* on all the human efforts and sacrifices needed to produce a thing — for nothing has value that can be obtained without effort or sacrifice. Value, in M. Pareto's phrase, "arises from the contrast between tastes and obstacles."

Value and Production. — This principle that value depends on supply and demand, or rather that value, supply, and demand are interdependent, gives us the clew to the movements of the market. We have seen its fundamental importance in our study of commerce in Chapter III and Chapter IV, and in our study of trade fluctuations in Chapter XIII. *Value is the automatic indicator which production follows.* If the want for a thing grows more intense, its demand rises, and therefore its value rises. The higher value induces producers to increase production, the supply is increased until it equals the demand, with the result that the value falls to its old level. Or suppose producers produce a thing in excess of the want for it, then its value will fall; warned by the fall in value they will reduce the production of it, and with the reduction in supply, its value rises to the old level. A high value indicates that a thing is wanted much by the people who can pay for it, it also stimulates the supply of it; a fall in value indicates that no more of a thing is wanted by the people who can pay for it, and at the same time discourages the further supply of it. Thus value comes to represent an equilibrium between production and wants, and one of the chief functions of the organizers of industry is to restore this equilibrium whenever it is disturbed.

Monopoly and Supply and Demand. — This interdependence of value, supply, and demand is not inconsistent with the fixing of prices by monopolists or the State. If a monopolist fixes a price, the demand adjusts itself to the price, and the monopolist will have to limit supply to the amount of that demand; if he raises the price he will have to restrict his output; if he wishes to increase his output, he will have to reduce the price in order to induce the public to take the increased supply. Similarly, if the State fixes the price, demand and supply adjust themselves to it; when for example it fixes taxicab fares at 50 cents a mile, it restricts the supply of taxicabs to those firms which can afford to ply them at 50 cents a mile, and restricts the use of them to those people who can afford to pay 50 cents a mile. If it raises its authorized price, it encourages supply and checks demand; if it lowers the price, it stimulates demand and, for the moment at any rate, checks supply. A constant extension therefore of the State's regulating activity is possible, in the way of fixing prices and wages, without substituting for the present "law of supply and demand" any different operative principle for the direction of production. Such an extension is taking place, and the effect of it is to substitute formal and public correlation of supply and demand for the haphazard private methods of ordinary commerce. The interdependence of value, supply and demand would cease to be operative only if the State, substituting public for private initiative throughout the economic organization, decided what should be produced, what work every one should do, how capital should be accumulated and applied, and land used, and how all goods and services produced should be distributed.

NOTE. — The activities of the State during war, especially in Germany, show that the alternative indicated to the present system is not an impossible or inconceivable one.

CHAPTER XVI

WAGES

I

Wages and Income

Money Wages. — A workman, asked what his wages are, will probably answer with some such phrase as " twenty dollars a week." That is the return he gets for his labor, that is the value that society has put on his energy and skill; the problem of wages for the economist is to discover how society came to put just that value on the workman's labor. Before, however, we can examine the chief solutions that have been offered to this problem, we must understand what wages are, how much, in fact, we know about a man when he has told us that his wages are twenty dollars a week.

Time and Piece Wages. — Labor is paid for in many different ways, the two chief being by Time Wages and by Piece Wages. Presumably the employer endeavors to get the same amount of labor for his money whichever method he adopts. When the work is uniform and output can easily be measured, he usually prefers to pay the workman a fixed price per piece. In the textile industries the settlement of the price to be paid between workman and employer is often a difficult matter; the calculation of wages from price-lists may be very complicated, the wage being the resultant of several variables. If a basis for piece rates, however, can be reached, the employer is relieved of the task of " driving " his workmen; since their wages depend on their output, they "drive" themselves. Some of the money saved in foremen's wages is usually spent in paying inspectors to examine the work and reject what is faulty. In many occupations, however, the work is so varied that there can be no standard by which the output of the worker can be measured, in others the quality of the work suffers when the worker is paid by the piece; in such cases the employer will pay the worker by the amount of time he takes over the work, and pay foremen to see that the worker does not waste his time. There are many variations and combinations of these two simple methods of paying for labor. In some occupations, again, payment for labor is made partly in kind, and the value of such receipts in kind must be reckoned in calculating the true wage: the agricultural laborer has often a cottage or garden at less than its full rent, the domestic servant receives board and lodging in addition to her money wage. In other occupations, such as the mason's and the grinder's, some deduction for trade expenses has to be made from the weekly wage before the true money wage is reached.

Regularity of Work and Wages. — The weekly wage, however calculated, is very far from giving the true economic position of the worker; not the wage-rate but the income actually received determines his position. Hence the regularity or irregularity of work is a most important consideration in comparing the advantages of different occupations. Many casual workers are paid at a good rate while they are working, but their opportunities of work are so intermittent that their average weekly earnings are low and their economic condition correspondingly bad. The London Dockers in 1889, though they secured the sixpence per hour for which they struck, failed to make their occupation a tolerable one; they did nothing to secure that each worker should have a sufficient number of hours of work each week to enable him to earn a sufficient number of sixpences to keep a family.

Similarly in seasonal trades (including all trades affected by weather or fashion), the earnings of nine months may have to keep the worker during twelve months; the weekly wages may be comparatively high, while the annual income is comparatively low. The economic position of the worker in such a case can only be represented by the average obtained by adding together the earnings of the whole year, bad weeks and good weeks together, and dividing by fifty-two. The important thing is not what the trade pays the worker for an hour's work or a week's work, but what it pays him for his services as a whole; the worker and his family have to live for fifty-two weeks, even if the trade only uses his services for forty weeks. In the case of trades subject to considerable cyclical fluctuations, such as the ship-building trade, the average weekly wage has to be calculated over an even longer period. A worker may work overtime for eighteen months and then be on short time or without work for another eighteen months; his true money wage is his average weekly earnings over the whole period.

Conditions of Employment and Wages. — Perhaps we may go further and average a man's earnings not over a week or a year or three years, but over a lifetime, and that not over the length of time he actually lives, but over the length of time a man ought to live if the conditions of his work are healthy. A trade employs a man, he adapts himself to its needs and thereby unfits himself for other work; he is dependent on the trade for a livelihood, and his true rate of wages is the amount of his earnings divided by the number of weeks he has to live on them. This is not commonly recognized: a wage is called a "good wage" if the rate of payment per week is high, though the employer may be exacting an amount of work from the worker so great that the man is "too old at forty." In the Heavy Steel Trade of Pittsburg, that industrial paradise, wages are "high," but one man in three works twelve hours a day, seven days a week, and, once a fortnight, twenty-four hours on end; in the corresponding occupations in England the wages earned are not more than half as much, but the working life is longer, so that the total earnings are probably not much less. Conditions of employment vary not only from trade to trade, but from firm to firm in the same trade; an employer can frequently, by offering a wage slightly higher than his competitors pay, or by his efficiency or the efficiency of his subordinates as slave-drivers, induce his workmen to work themselves "out" by the age of forty. In such cases the true rate of wages should be calculated by adding up the worker's earnings and dividing the total, not by the twenty-five years he did work, but by the fifty years his working life ought to have lasted; "higher" wages when treated this way will often become low wages. Similarly allowance must be made in the case of dangerous or unhealthy trades for periods of illness; in the case, for example, of high school teachers, for the expense of an occasional nervous breakdown.

The "Family Wage." — The distinction between income and wage emerges in another connection. The worker's wages is what he earns himself, the income on which his family can draw usually includes the earnings of some other member of the family. Although boys and girls do not usually hand over the whole of their earnings to their parents, they contribute something to the upkeep of the home; and a man whose wife or children are earning might only make his economic position worse by moving to a district where he could command a higher wage himself, but his wife or children could find no employment, or less remunerative employment. In spite of the tendency of modern industry to deal with the individual rather than with the family, the family is still an economic unit as well as a social unit for many purposes.

Real Wages. — So far we have been considering the money income of the worker; the real income of the worker, however, consists of the goods and services that the money income will purchase, and the purchasing power of money varies from place to place, and from time to time. Allowance must be made for differences in the cost of living, a difficult and hazardous calculation to make, before we can compare wages in one country or district with wages in another, or wages at one time with wages at another. For instance, the high money wages of artisans in the United States are discounted by the high cost of living; the rise in money wages in England since 1895 has been more than counterbalanced by the concurrent rise in prices. Whatever the cause of them, changes in the general level of prices do occur, wages usually do not rise as quickly or fall as quickly as prices, so that a great change in the economic condition of the wage-earning class may take place, of which the changes in money wages give no indication.

So far we have been considering wages as an indication of the economic position of the worker. The weekly wage is only a rough indication of the true money income, and the money income may give a false impression of the real income. Other elements that can be subjected to no money measure enter into a comparison between different occupations; social standing, opportunities of promotion, risk, independence, health, have all to be considered. "The attractiveness of a trade," in Dr. Marshall's words, "depends not on its money earning but on its Net Advantages." We have next to consider wages from the point of view of the employer.

II

Wages and Labor Cost

Relation of Wages to Labor Cost. — How far do high wages mean high labor cost or value, how far are low wages "cheap labor"? Labor cost and wages are constantly identified. Protection is defended on the ground that it keeps prices up, and high prices are needed to pay high wages. Labor leaders are told that higher wages will not benefit the workers because they will mean higher prices; legislation to raise wages in "sweated" industries in England was opposed on the ground that "sweated" articles were bought chiefly by the very poor, and to raise the wages of the workers who made them would raise their prices and make it impossible for the poor to buy them. The fallacy in such arguments is easy to detect. The employer buys labor, not the laborer; if he can get a great deal of labor from one man, it may pay him as well as, and will probably pay him better than, buying a little labor from each of two or three men. High wages, if the amount or quality of labor given in return for them corresponds, mean "cheap labor"; low wages, if the labor given in return is inefficient or small in quantity, mean "dear labor." The cheapest textiles in the world are made in Lancashire, where textile "real" wages are the highest in the world. Dr. Schulze-Gaevernitz sums up the conclusions of his investigation into the relation between wages and product in the cotton industry in the sentence, "Where the cost of labor (*i.e.* piece wages) is lowest the conditions of labor are most favorable, the working day is shortest and the weekly wage of the operative highest." Mr. and Mrs. Webb point out that some of the most expensive West of England fabrics are made by the lowest wage labor in the English woolen industry; while some of the highest wages in the industry are earned by weavers of shoddy "tweeds" in the West Riding.

Wages and Output. — Wages and the value of labor are two distinct things; the value of labor, what it costs him, is the thing that matters to the employer, wages to the laborer. Wages may rise indefinitely without hurting the employer's interests, so long as his labor cost is not increased; so long, that is, as he pays the higher wages only to workers who earn them by an equivalent output of labor, and can get as many workers of that quality as he needs. On the other hand an

employer may by improved organization reduce his labor cost (*i.e.* the value of labor) without disadvantage to the worker, if the result of the improved organization is to enable the worker to earn more, though at lower piece-rates; there is a limit, however, to this possible advantage in the danger of undue "speeding up" or "overdriving." The opposition between employer's interest and worker's interest is wrongly conceived, if it is thought of as simply a difference about wages. It is to the employer's interest to beat down wages, only if the labor to be got from each worker is a fixed amount; if an increase in wages will stimulate the worker to increased exertion and enable him to do better work, then it may pay the employer to raise wages, for by so doing he will be getting his labor as cheaply. Similarly, the worker can get the higher wages, which are his object, without increasing labor cost to his employer if he increases his efficiency; it is of course to his interest that the value of labor should be as high as possible, but wages can be increased by increasing the amount of labor given for them without any change in the value or cost of labor. A Lancashire manager once came to manage a Yorkshire weaving establishment. Meeting an acquaintance soon afterwards he said: "I can't understand how you Yorkshire employers can get your labor for the wages you pay." After three months' experience of the "cheap" labor, he met the same acquaintance with a different tale: "I can't understand," he said, "how you Yorkshire manufacturers can pay the wages you do for the labor you get."

III

Wages and Trade Unionism

Inseparability of Worker and His Labor. — Labor is not a commodity, but it is bought and sold like a commodity. Society (until recently) has allowed its price to be settled by the relations of supply and demand like the price of any commodity. Both the thing sold and the sellers of it, however, have characteristics which distinguish labor from commodities. The seller of labor cannot control the quality of the supply. The laborer sells labor, he does not sell himself; the quality of the labor he has to sell depends largely on his social environment, and especially on his parents. If he has been starved as a child in body and mind, his work as a man will suffer; if no foresight was exercised in his choice of an occupation, and he was put to the trade which gave the biggest immediate wage and no prospects of anything better, he will have no special skill to sell. The expenditure of money and trouble on training is necessary in youth, if the labor of the man is to be valuable; the investment must be made by the parents, the return comes not to the parents but to the child. Hence many parents do not make the investment even when they could. For the same reason the supply of labor is adjusted to the demand only very slowly. The success with which it is done depends largely on the foresight of parents, and after all their pains some great technical invention may make their forecast wrong. Though he sells his labor and not himself the laborer must deliver it himself. "It matters nothing to the seller of bricks whether they are to be used in building a palace or a sewer; but it matters a great deal to the seller of labor" (Marshall). There may be a great demand for a certain kind of labor in one district, while in another district men with that kind of labor to sell are unemployed, yet unable to leave the district because they own their own houses or have children working.

Perishability of Labor. — Again, labor, like time, will not keep: it must be sold at once or it is lost forever; it cannot be withheld from the market one day and saved till the demand is better. This characteristic of labor puts the seller of it in a weaker bargaining position than the buyer, and his position is usually the weaker without this aggravation. He has usually

no reserve, or only a small reserve, and has therefore less power to wait; he withholds his labor only at the risk of starvation or the Poor House for himself and his family. He has usually an inferior knowledge of the market, of the prospects of trade and the demand even for his own labor; is it likely that unaided he can match his wits against a keen business man and meet with success? Again, he has only one unit of labor to sell, and is absolutely dependent on the sale of it; the employer may be purchasing hundreds of units, and can easily dispense with any individual unit without loss. Their general carelessness about money-getting makes it *a priori* unlikely that working men get all they could in wages. Unlike their antagonists, the employers, they are not engaged in a struggle to get rich; like the scholar and the professional man, the ordinary working man is not interested in money-making. So long as he gets the wage to which he is accustomed, and gets it steadily, he is satisfied; as a rule it is only when an attack is threatened on his customary standard, or rising prices invite an application for higher wages, that he fights with any energy.

Purpose of Trade Union. — The *trade union* is an organization designed to put the seller of labor on an equality with the buyer as regards bargaining strength. The first great weakness of the operative acting singly is his lack of any reserve that will enable him to hold out for a fair price for his labor. By associating with other operatives and forming a common fund, he can put a "reserve price" on his labor; the union will maintain him while he is without work through refusing work at less than the standard rate. By contributing to the common fund he "insures against" exploitation. The second great weakness of the operative acting singly is that he sells labor retail, while the employer buys it wholesale. By associating with the other operatives in his trade, the seller is put on an equality with the buyer, or even given an advantage in this respect; instead of having to deal with a ingle impecunious laborer, the employer has to bargain with a rade union delegate controlling, if not all the labor in the rade, at any rate a sufficient proportion of it to inconvenience he employer who does not come to terms with him; instead of risking the loss of a single laborer, the employer risks the loss of all or most of his laborers. And a trade union delegate or agent, appointed because an association for the purpose of collective bargaining must have officials, remedies the third great weakness of the operative, his ignorance of the market and lack of experience in salesmanship. Just as the business man, however experienced himself, employs the services of a specialized agent, the stock-broker, in selling his stock exchange securities; just as the man of property who wishes to sell property, if he is wise, employs the assistance of a broker; so the operative in an organized trade sells his labor through an agent, leaving the agent to settle the price. In London, where standards of social organization are low, and in parts of America which seem to have no standards, employers object to their operatives using agents; adopting the attitude of Pharaoh to Moses and Aaron, they insist on "dealing with the men direct." They assert a claim "to carry on their businesses in their own way," as if any business that controlled the fates of some hundreds of citizens and their families could be a purely private affair. In the trades in which trade unionism is strong, employers as well as operatives have found it a convenience to deal through agents. The standard rate and standard conditions, the collective bargain, and the expert agent, are the chief aims of trade unionism; friendly society work, strikes, and even political work are only means to these ends.

CHAPTER XVII

WAGES (*Continued*)

I

The Subsistence Theory of Wages

Origin and History. — Three theories have had a wide currency as explanations of wages. The earliest is the Subsistence Theory, the so-called "Iron Law of Wages," the theory that wages constantly tend to fall to the amount just necessary to maintain the laborer and bring up the new generation. It is a cost of production theory. It arose in the eighteenth century, when observation of laborers, especially in France, showed them in possession of a bare subsistence. Any increase in their incomes was followed, it was thought, by an increase in the population, and the competition of the additional labor would bring the remuneration of the laborer down to subsistence level again; if, on the other hand, the laborer received less than subsistence, he would starve or his children would, and the consequent shortage of laborers would force the value of their labor up again to subsistence point. To-day the theory is based on the belief that competition for work is so great that any subsidy to the laborer from the State or charity will merely induce him to accept a lower wage, leaving his income as it was.

The theory is a gloomy doctrine and did much to earn for Political Economy the nickname of the "Dismal Science"; it is, however, a true account of the influences governing the remuneration of labor among unreflecting and custom-ridden people, who have never known more than a bare physical subsistence. The government of Egypt, since the English occupation, has doubled the wealth of Egypt, but the population has almost doubled also, and the individual fellaheen are therefore not very much better off; the great irrigation works of India have made individual peasant-farmers somewhat richer, but their chief effect has been to increase their number. The Report of the Royal Commission which recommended the reform of the English Poor Law in 1834 was based on this highly abstract theory and collected a large number of instances in which subsidies from the public treasury had depressed wages; the Report, however, can hardly be taken as a reliable explanation of the condition of labor in 1834, since it ignored the enclosure of 7,000,000 acres of common, the destruction of the chief domestic industries, the rise of the early unregulated factories, the great war with its crushing burden of taxation, in a word, the Industrial Revolution; and the evidence collected for the Royal Commission of 1905 suggests the subsidies from the public treasury have little or no effect on wages to-day.

Relative Character of Subsistence Theory. — The word "subsistence" in this theory can be given no very definite meaning. Such attempts as those of Mr. Seebohm Rowntree to state an income which would just supply a family with the bare necessities for physical efficiency give the term a meaning, which is definite and valuable, but something quite different from the meaning it must bear in this theory of wages; for it is only since the middle of the nineteenth century that a majority of the workers of any country have enjoyed a subsistence income according to his definition, and outside English-speaking countries it may be doubted whether a majority of the workers in any country have it to-day. Even if that difficulty be overcome, the history of the working classes in the nineteenth century has refuted the theory. In Western countries population does not respond to increases in wages in the way this theory requires. If anything, the reverse is the case; as wages rise the birth-rate falls, and the lowest recorded birth-rates are in those states where the worker has exceptionally high wages, namely in Australia and among the native-born populations of Rhode Island and New Jersey. In the United Kingdom, although population grew steadily, real wages trebled in the last seventy years of the nineteenth century. The theory, however, in a confused and unrecognized form, influences political thinking still and accounts for a good deal of the opposition to social reform.

II

The Wages Fund Theory of Wages

Basis. — The Subsistence Theory was succeeded as the "orthodox" explanation of wages by the so-called Wages Fund Theory. The production of most commodities under modern conditions takes a long time; the laborer has to live while he is waiting for the product of his labor; what he lives on while he is waiting is the accumulated stores of past production. In this sense wages are an advance from capital. Hence it was argued that "Wages depend mainly upon the demand and supply of labor; or, as it is often expressed, on the proportion between population and capital" (Mill). As a consequence of the theory it followed that, so long as the proportion between population and capital remained unchanged, wages could rise in one industry only at the expense of another. The proof of this rested on three assumptions: first, that wages could be increased only at the expense of profits (so long as the proportion of population to capital remained unchanged); second, that any fall in profits, due to such a rise in wages, would drive capital out of an industry or a country, and so lessen the demand for the labor; third, that any rise in wages would attract new labor from other industries, which by its competition would force wages down again, or the rise in wages would lead to an increase in population, which would have the same effect in forcing wages down. None of these assumptions are borne out by the facts. The first confuses wages with labor cost; a rise in wages need diminish profits not at all, if accompanied by a corresponding rise in efficiency. The second attributes to capital a sensitiveness which it does not in practice exhibit; capitalists expect some fluctuations in profits, and the causes of fluctuations are so numerous that concessions to employees have not the overwhelming importance attached to them in this theory. The third assumption attributes to working men an adaptability, a knowledge of the labor market, and a determination to find the most remunerative employment, which they do not exhibit.

Difficulties of the Theory.—The difficulty of squaring with the facts the broad statement that wages depend on the proportion between population and capital led Mill first to amplify and qualify it, and afterwards to abandon it. " By population," he said, " is here meant the number only of the laboring class, or rather of those who work for hire; and by capital, only circulating capital, and not even the whole of that, but the part which is expended in the direct purchase of labor." The inconvenient fact of fluctuations in wages he could then explain by arguing that in times of depression some of the capital available for wages was withdrawn from use, and this inconvenient " capital which the owner does not employ in purchasing labor " " is the same thing to the laborers, for the time being, as if it did not exist " — for all the world like the wasted labor which Marx could not fit into his Labor Theory of Value, and which he said, therefore, " does not count." Only the capital actually spent on wages " counts " in this theory; " nothing," Mill says, " can permanently alter general wages, except an increase or a diminution of capital itself (always meaning by the term, the funds of all sorts, destined for the payment of labor)," compared with the " quantity of labor offering itself to be hired." Similarly nothing can permanently alter the general, which presumably means the average, price of turnips except an increase or a diminution of the funds of all sorts destined for the purchase of turnips, compared with the quantity of turnips offered for sale. All the theory amounts to in this exact form is that the amount received in wages depends on the amount spent in wages.

Present-day Significance. — The importance of the theory lies in its consequences, which, like those of the Subsistence Theory, still influence opinion, although the theory itself is dead. The *exact* statement of the theory has obviously no important consequences, but is easy to prove; the loose statement, that wages depend on capital, cannot be proved, but has extremely important consequences. Now the proof of the unimportant exact statement gave authority to the important inferences to be drawn from the unproved general statement. If wages were fixed by the proportion between population and capital, trade unionism was futile and wicked; it could raise the wages of one section of workers only at the expense of the wages of other sections; wages generally could only be raised in two ways, by increasing capital or checking population. This theory is the explanation therefore of the belief, common in the middle class, that Political Economy has proved trade unionism to be futile.

III

Productivity Theories of Wages

Basis. — The weaknesses of the Wages Fund Theory directed attention to the influence which the efficiency or productivity of the worker exercises on wages, and recent theories base themselves on this influence. We have already had occasion to notice that high wages do not necessarily mean high labor cost. This fact lies at the basis of the productivity theory of wages. A worker who is efficient at his work will get high wages, because the product of his work will be great; anything that increases the efficiency of the worker will, by making him more productive, tend to increase his wages. The chief contemporary explanation of wages is that competition secures for the laborer just what he produces; "Wages," in Hadley's words, ". . . are the discounted product of industry," *i.e.* the value of the product less the interest on the wages from the time when they are paid to the time when the employer receives the price of the product.

Wages as a Market Price. — This conclusion is reached (or supported) by an analysis of the action of the employer who, as we saw, is the organizer of production. The different employers producing any commodity compete in the sale of it; the price at which it is sold is a market price, settled by the general relations of the supply of the commodity and the demand for it, and therefore fixed or "given" for any individual employer. The endeavor to secure the productive economies of a large output leads employers to let their products go at any price that covers cost of production and leaves some profit, and an employer who fails to adopt the most suitable methods and appliances for keeping cost of production down is beaten out of the trade. The price, then, which he gets for his product is fixed for the employer, not usually by him; even if there are only a few employers or only one employer in the trade, the possibility of others entering the trade and the desire to sell a large output will keep prices down. Similarly competition between employers for land, labor, and capital, will keep the prices of these agents of production up. For any individual employer the price he has to pay for any kind of labor is fixed by the power which the laborer has of taking his labor to some other employer, if his present employer will not give him the market price for it; the price that any *trade* has to pay for its labor is fixed by the certainty that labor will be diverted from the trade, if other trades offer better wages for the same degree of skill and exertion. Wages are usually the last thing that an employer, cutting down expenses, attacks; partly because bargaining about wages, except in well-organized grades, may mean as many bargains as there are individual operatives, partly because discontented and hostile operatives give bad labor. Hence for the individual employer rates of wages, just like the rate of interest and the rent of land, may be taken as fixed.

Basis of Profits. — If, then, prices are fixed for him, and the rates he has to pay for his agents of production are fixed for him, what control can an employer exercise over his profits? For his profits are merely the difference between what he pays for the "agents of production" and what he receives for the product. There is one way in which he can increase his profits under these conditions, namely, by securing a more economical combination of the agents of production than his competitors. Paying the same rates of wages for labor, the same rate of interest for capital, the same rent for equally advantageous land as his competitors, he can still, by superior organization, produce cheaper than they can, and, since he gets the same price as they, secure larger profits. He may employ his capital in more effective forms, he may substitute machinery in a process usually performed by hand, he may plan his factory differently, he may combine the different grades of labor in different proportions, he may combine his materials differently or experiment with new materials; even in the most elaborate and scientific industry there is always room for improvement and therefore for the ingenuity of the organizer.

Organization of the Agents of Production. — Hence employers are constantly comparing different kinds of labor,

labor and capital, capital and land or its products. They buy each simply according to its productivity. If by using more capital and less land or labor they can increase their product for a given expenditure, they will use more capital, and to get this additional capital will, if necessary, offer a higher price for it; *i.e.* the rate of interest goes up because an addition to capital will increase production more than an addition to labor or land. If by employing more labor and, in proportion, less capital and land they can increase their product for a given expenditure, they will employ more labor, and to get it will, if necessary, offer higher wages; *i.e.* wages go up because the productivity of labor has increased. In the same way the value of land is determined by its productivity to the user of it. Different kinds of labor are compared with each other in the same way, the employer using more foremen or more general laborers or more machine-tenders, according as each will increase his production. Conversely, if labor is cheap, relatively to capital and land, the employer will use more of it; if capital becomes cheap he will increase his use of capital; if land is cheap he will use more land. Land, labor, and capital compete through the employer for employment and payment; he distributes his resources among them solely in proportion to their productivity; *i.e.* their value depends on their productivity to the organizers of production. There is a struggle among the different possible agents of production for the survival of the fittest, the "fittest" being the most productive; the "selection" of the fittest is done by the employer in the act of organizing production. Some writers speak of the employer in this connection with the awe one would observe towards some stupendous natural force, and term this comparison of the agents of production the "Law of Substitution."

Application of the Marginal Concept. — The analysis is carried one step further: land, labor, and capital are always employed together, no productive process can be carried on

without the coöperation of all three. The question, therefore, before the employer is never, "Shall he employ *any* labor or *any* capital or *any* land at all," but always, "Shall he employ more land and less labor and capital, or more labor and less land and capital, or more capital and less labor and land?" He considers the productivity not of land as a whole, labor as a whole, or capital as a whole, but of a little more or less of each; hence economists (with that fondness for the word "marginal" which does so much to confuse the reader of a modern economic treatise) speak not of "Productivity" but of "Marginal Productivity," and say that the values of land, labor, and capital all depend on their "Marginal Productivity."

Relation of Supply to Marginal Productivity. — This refinement of the theory — like the Marginal Utility Theory of Value — is important because it brings out the relation of supply and demand in determining the value of an agent of production. When labor is plentiful, relatively to capital and land, as in Eastern countries, it will be employed in work which in richer countries is done by capital in the form of power-machines, and its work will be comparatively unproductive because it lacks tools, machines, and other capital appliances; therefore its wages will be low. In a new country, where land is plentiful and labor relatively scarce, labor will be employed only where its productivity is high, capital will be imported to supply it with the best implements and aids; therefore wages will be high and rents low. The productivity of an agent of production depends on the amount of its supply relatively to the supply of the other agents with which it coöperates; more of it, by lowering its productivity, will send its value down, less of it, by raising its productivity, will send its value up. Conversely a change in the organization of production which increases its productivity will increase the demand for it and raise its value, a change that lowers its relative productivity will decrease the demand for it and send its value down.

Criticism. — This theory seems to rely too much on the effectiveness of competition. It assumes too much in assuming, as it does, that employers *will* pay what they *can* pay. They *can* pay the worker the value of what the worker contributes to production; they need not do so unless the competition among employers for labor is at least as strong as the competition among workers for employment. Now although there are usually employers wanting labor as well as workers wanting employment, there are usually more workers wanting employment than workers wanted by employers. The exponents of the theory argue that the competition among employers must be the keener for three reasons: they have buildings and plant which earn them nothing if they cannot get labor; they have a " connection " in their market which they run the risk of losing by any stoppage; and they are always anxious to increase their output in order to avail themselves of the decreased cost of production which is usually possible with a larger output; to these may be added the even more important consideration that the employer *can* make profits by successful anticipation of the needs of the consumer as well as by capable organizing work, without paying the laborer any less than the discounted value of his product. Against these considerations must be set the fact that the laborer risks more than the employer if they cannot come to terms; the employer risks loss of profits, the laborer risks starvation and the starvation of his wife and children, or alternatively, the degradation of the Poor House; if the employer risks having his plant standing idle, the laborer risks having to break up his home, leave the town he is attached to, and seek employment in a new district. On both sides the risk of loss is so great that the parties usually come to terms with surprisingly few disputes; and the connection between any individual employer and any individual workman is in most trades one which can be broken only with loss to both, since a workman who has been some time in a shop is worth more to his

employer than a new man would be or than he would be in another shop.

Although the employer can make profits while giving full productivity value for labor, it is a characteristic of business that a man takes what he can get, and an employer would be merely unbusiness-like who did not take advantage of the laborer's weakness as a bargainer; fortunately some business men are unbusiness-like. Moreover the " productivity " of the laborer depends, more than on anything else, on the employer's powers of organization. Slack organization on the part of the employers in a district will make the labor of the district less productive than labor of the same skill and the same intensity in districts where employers do their organizing work better. To say in such a case that wages are low because the productivity of labor is low may be true, but it is to suggest that the workman is to blame when really the employer is at fault. Where this is the case, the workers, by insisting on higher wages, may increase their productivity without in the least increasing their labors; for the productivity of a given amount of labor will be increased when the employer abolishes waste, removes disorganization, and supplies his workers with the best appliances.

Productivity and Market Value.—The word "productivity" requires examination. The word usually means " output " measured by the yard, ton, or bushel. But when we say that wages depend on the productivity of labor, productivity is not equivalent to " output "; it means merely " productivity of market-value," which *may* correspond with output, but also may not. If a king dies suddenly, there is a sudden increase in the value of mourning goods; the labor, of which these goods are a product, has become more " productive," although the skill and exertions of the laborer, and the number of yards of cloth he turns out, are precisely the same as they were before. This distinction is often forgotten, and the productivity theory of distribution comes to be used (unconsciously perhaps) as a justification of the present unequal distribution of the national income. Each, it seems to show, gets what he produces; what could be fairer? It is forgotten that the market-value by which this productivity is measured bears no constant relation to social service. The theory is true (if at all) only if we give "productivity" its second meaning, "productivity of value," the theory justifies the present distribution (if at all) only if it has its first meaning, "output." In the only sense of the word "productivity" in which the productivity theory of distribution is true, the man who receives $25 a week for looking after Pekinese puppies for an American heiress is four times as "productive" as the farm-laborer receiving $25 a month; the services of the two to society do not bear the same relation.

Substitute Terms for Productivity. — To avoid the ambiguity of the word "productivity," the commoner word "efficiency" is sometimes substituted, and wages are said to depend on efficiency. But the new word is not free from ambiguity itself; efficiency will help to explain differences in wages in the *same* occupation, since such differences will be reflected in output, but it will not explain differences in wages in *different* occupations. We have no common measure of efficiency in different occupations except the wages paid, so that to use efficiency to explain the wages is to beg the question. The low-wage worker may be just as efficient *at his work* as the high-wage worker at his, and the low-wage work may be equally indispensable to society; while it may be true that the low-wage worker could not do the high-wage worker's work, it may be equally true that the high-wage worker could not do the low-wage work; a joiner could not (without a fresh industrial training) tend a spinning mule, but neither could a spinner (without a fresh industrial training) frame a roof. Yet another principle of wages has been offered in "Economic Worth."[1] Economic Worth, however, turns out on examination to be merely a misleading synonym for productivity of market value — misleading because the plain man always associates with the word "worth" the idea of moral desert, so that the statement that distribution is in accordance with "economic worth" inevitably carries with it the suggestion that the poor are poor because they are bad and the rich are rich because they are good.

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[1] Smart, *Distribution of Income*, p. 322.

IV

The Influence on Wages of the Standard of Life

Complicated Character of Wage Problem. — The theories which we have been considering are really attempts to answer different questions about wages. The different theories are not necessarily inconsistent; each may contain and express one important influence on wages, while neglecting other influences. There are three problems of practical importance involved in the apparently simple question, What fixes wages?

(1) What fixes the share that goes to labor of the joint product of labor, land, and capital?

(2) How is it that wages in a country like England are usually higher than wages on the Continent, and usually lower than wages in the United States?

(3) Why do wages vary in different occupations? and what fixes the relation between wages in different occupations?

Subsistence and the Standard of Living. — The Subsistence Theory, while professing to be a complete explanation of wages, was directed primarily to answering the first question; for the first question was the question of most interest in an age when laborers were everywhere poor, although most things were made by manual labor with little aid from capital. It found the explanation of low wages in the competition of the laborers for employment, which kept wages down to a bare subsistence. The theory emphasizes the importance of the influence — competition for employment — which makes labor, although it is indispensable, be content with only a share, and not a very large share, of the joint product. The theory, however, fails to give a satisfactory explanation of wages, because it assumes *unlimited* competition among laborers for employment. So far as limits are placed on competition among laborers, wages can be kept above bare subsistence level. Now limits *are* placed on competition. The object of trade unionism is to place a limit on competition for employment; a trade union is an association of workers with a particular kind of labor to dispose of who agree not to accept wages below a certain rate, and if necessary to prefer unemployment. But apart from the overt action of trade unions, competition is very seldom without limits; there is in nearly all occupations a tacit and informal agreement among the workers to observe a certain standard of life and to refuse any wage which will not support that standard. If we substitute "standard of life" for "subsistence" in the theory, it will throw a great deal of light on wages. The Subsistence Theory made the mistake that Mill made of identifying the "supply of labor" with the population; the two are distinct, because the population consists of human beings with wills of their own, who can vary the amount of labor they can and will give. Unless the wage offered will cover the standard of life of the worker, he will usually refuse to supply any labor at all, confident that no one else who can do the work will take it at a less rate than himself. Wages then cannot usually fall below the standard; they will not rise much above it, partly because competition among employers will deter them from offering more, partly because the ordinary workman, once he has got his standard of life secured, has little further nterest in money-getting and will not press for more.

Nature of Labor "Supply." — In considering the meaning of the word "supply" in Chapter XIV we found it necessary to distinguish between two uses of the word: (1) the amount

of a commodity that exists, or can be produced within a given time; (2) the amount of the commodity that is or will be offered for sale. Whether the two amounts coincide or not depends, we saw, on the control of the commodity. Where free competition in selling obtains, they will coincide; where there is some restriction on competition, they need not coincide. In the same way the "supply of labor" may mean either of two things: (1) the entire energies of the entire population; (2) the amount of work that the population is induced to perform. It is the supply of labor in the second sense that influences wages, just as it is the "supply" of a commodity in the second sense of that word that influences value. And in the case of labor the existence of tacit or explicit agreement to restrict competition in selling makes it unlikely that the "supply of labor" in the second sense will ever be exactly the same thing as the "supply of labor" in the first sense.

Relative Character of Standard of Living. — The Standard of Life is a conception that is seldom defined, yet is not indefinite; it is difficult to express in dollars and cents, yet it is held with sufficient clearness to influence action. The conception becomes more comprehensible if we speak of standards rather than the standard, because a workman's conception of the wage to which he thinks himself entitled is influenced by several standards. There is the "grade" standard; the man with a trade considers that he is entitled to a living about 50 per cent better than that of his laborer. There is the trade standard; the relation of spinners' to weavers' wages in any given district and branch of the textile trades is well understood, and a change in one would probably lead to a demand for a change in the other. There is the district standard; the Fall River textile operative expects and gets a higher wage than the South Carolina textile operative, the New York City than the country carpenter; and, similarly, countries have different standards, after all due allowance has been made for differences in the cost of living. There are many standards, and the principles on which they vary are many; but the *conception* of a standard of life is definite enough and influential everywhere.[1]

Influence of Conception of a Standard. — Certain modern methods of remuneration, economical to the employer but justly suspect with the operative, are based on the influence of this conception of a standard. The premium bonus system is the type of them. A piece of work will be timed; since the worker cannot be expected to work at full strain all the day, a proportion, usually a third, will be added to this time, and the

resulting time is taken as the standard time in which the piece of work *ought* to be done. Then the worker is encouraged to get more use out of his employer's plant by being promised a reward if he does the piece of work in less than the standard time. He is not given, however, the full saving effected by his diligence; the employer does not find it necessary to give him the full equivalent of his *additional* output; it is usually divided equally between employer and operative. If the operative saves an hour on the standard time, he will be given an additional *half-hour's* pay; if, for example, he gets four hours' work (according to the agreed standard) done in three hours' actual time, he is paid for three and a half, not for four hours' work; *i.e.* the employer gets the extra *hour's* work out of him for an extra *half-hour's* payment, in addition to extra earnings by his plant due to the greater use of it. Why is this possible? How is it that workers who would strike against a reduction of 25 cents a week on their standard wage will cheerfully give 10 per cent more work for 5 per cent more payment? This reason would seem to be that their demand is governed by their conception of a standard wage. Regarding, say, \$15 a week as their due, because \$15 is the standard of the trade, grade, and district, they will fight strenuously for \$15, and will usually prefer unemployment to accepting a lower wage; but *once they have got their standard*, anything above that is so much "in their pocket," and they will not higgle about the price of the *extra* labor. Employers, recognizing this, usually induce men to accept the premium bonus system by guaranteeing the standard wage or something above the trade union standard. It should be noticed that encroachment on the workman's leisure is a different thing; if the employer asks him to exceed his standard time, the employer has to pay time and a quarter or time and a half for the excess; but apparently he can induce the worker to exceed his standard output by paying him half-time rates for the excess.

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[1] The head of an English firm of milling-machinery makers recently discovered that there were among the firm's employees a number of laborers receiving a wage of only 18*s.* (about \$4.50) a week. The settlement of wages being a department of the firm's business he delegated to a subordinate, he had been ignorant of this, and at once had the wages raised to a guinea (about \$5.25) a week. (Apparently he was ignorant of the "law" that competition forces the *entrepreneur* to hand over to the laborer the exact equivalent of his productivity.) The immediate result was that a class of machinists, whom he considered quite well paid at the wage they were receiving, about 27*s.* (\$6.75) a week, demanded a corresponding advance. The relation of the two standards was so clear to them, that they conceived that they had a *right* to the advance. Laborers with a recognized industrial status usually receive about two thirds the wage of the tradesmen with whom they work. The influence of the conception is illustrated by the comparative uniformity of earnings where wages are on a piece-rate basis. Variations occur, but they are not sufficient to destroy the conception of a standard; rather, the workers adjust their productivity to the standard. For the same reason, as has often been noticed, piece-workers' hours of work can be reduced gradually without any reduction of output; the workers aim at a standard wage, and do enough work, whatever the time at their disposal, to earn it. If there were no such standard, such a question as "What wage does a Fall River spinner earn?" would be meaningless; we could only ask "At what rate is he paid?" In occupations where a standard time wage is paid, there are differences of efficiency and industry among workers receiving the same wage; employers, however, tolerate them, because the more efficient compensate for the less efficient, and an exact adjustment of wages to output would usually not repay them for the trouble involved, while the operatives tolerate them because they are dominated by this conception of the standard, to which the less efficient as well as the more efficient are entitled. The manual workers as a class believe that if a man will not work neither shall he eat; but they have never subscribed to the economic doctrine that a man should eat in proportion to his work.

To the influence of the same conception of a standard may be put down the carelessness about spending any excess of the standard wage, which has been more frequently noticed than the corresponding carelessness about money-getting in excess of the standard. We are told that laborers accustomed to $12 a week, if their wages are raised, will spend the additional income in riotous living. Certainly any windfall, whether it take the form of a legacy, a compensation payment or a sudden increase in wages, is spent with less economy than the standard wage; the expenditure of the workman's standard wage is probably — in spite of middle-class critics who have never tried to live on $12 a week — the most economical spending done in the community, but anything above the normal will be spent with less care, just as in the middle class sudden wealth usually leads to extravagance. Cases do occur where the influence of this conception takes another form, and the laborer prefers to work less at the new rate, so that his actual income remains unchanged; this will only happen when the standard of life is very low, as it is, for example, among casual dock laborers. There are occupations in which no standard does exist, the so-called "sweated trades"; in them the workers' spirits have been broken; they are incapable of the tacit combination needed to maintain a standard, and they can offer no resistance to any encroachment on their livelihood. The Subsistence Theory is a true explanation of their wages; and since they are unable to set up and protect a standard for themselves, it is essential, to prevent social degeneration, that the State step in and impose a standard from outside.

In most cases, however, a standard exists; it is not a permanently fixed thing, but relatively to other economic influences it is fixed, and it imposes an effective restriction on competition. The trade union, when it exists, is primarily an organization for protecting this standard, and, as opportunity occurs, forcing it up. The other two theories of wages

ignore this important fact of social psychology, although they may be not inconsistent with it. They assume that the worker will always insist on getting the absolute maximum that he can get, *i.e.* that he is actuated in his economic relations by purely commercial motives. He is not; although commercialism is invading his moral ideas, percolating downwards from the commercial class, his principle is much nearer to that which Ruskin preached, "Unto this last even as unto thee."

Permanence of Conception of Standard. — This conception of the standard of life, though fluctuating, is a relatively fixed thing in the flux of forces which determine distribution. The workman by combination, tacit or explicit, fixes it, and his employer adjusts production to it. The employer will do all in his power, usually with success, to secure an increase in output in return for every increase in wages, and, where the local standard compels him to pay higher wages than his competitors in other districts, to extract an amount of work correspondingly greater. Hence the theory that wages are fixed by the worker's standard of life is not inconsistent with the theory that wages correspond with the worker's efficiency; the worker fixes the standard, and the employer sees to it that his efficiency corresponds. It is not suggested, of course, that the worker can raise his wages by the simple process of spending more; the conception of the standard of life influences wages only by producing concerted action or tacit combination among the workers who supply a certain kind of labor. For this reason it is usually more influential in stiffening their backs against a reduction in wages than in accelerating an advance. Anything that leads the workers to act together increases their control over wages; this conception of the standard of life leads them to act together, almost automatically, whenever real wages are threatened. It corresponds in industrial warfare to the trenches with which a modern army secures its line; it is a defense against attack, and a means by which any new advance may be made secure.

V

The Influence on Wages of the Volume of the National Dividend

The Wages Fund Theory was directed primarily to answering the second question, how is it that wages are usually higher in England than on the Continent. It calls attention to the very important fact, that quite apart from the distribution of a country's wealth between land, labor, and capital, the amounts which all three receive are influenced by the amount of that wealth. If we can assume that the distribution between the three factors proceeds on much the same principles in different countries, then the different levels of wages in different countries must be due to differences in the amount of the fund or flow of wealth to be distributed.

Effect of Rising Wages on Other Shares. — The supporters of the Wages Fund Theory made the mistake (natural enough at the time) of assuming that capital was the only important influence on that fund or flow. A wider observation of facts has shown that the amount of a country's wealth — the "National Dividend," as Dr. Marshall calls it — depends not solely on the amount of capital employed, but also on the quality of the labor and the nature and amount of the natural resources of the country. Workers enjoying a high standard of life and well trained industrially increase the National Dividend as much as an increase in capital will increase it, and may increase wages without trenching on the profits of capital; similarly wages can be high without trenching on profits, where a few million people have at their disposal the resources of a continent, as they have in Australia. If the natural resources of a country, or its accumulated capital, or the science and skill of its inhabitants are great relatively to the number of its inhabitants, wages will be high; if population is dense, and there is little accumulation of capital (as in India), or there are no exceptional natural resources (as in Belgium) to swell the National Dividend, wages will be low. Mill was quite right in arguing that any action of the worker that checked the accumulation of capital would tend to check the growth of wages, since it would check the National Dividend, on which wages as well as profits and rent depend; he was wrong in assuming that a rise in wages *must* check the accumulation of capital, and that the accumulation of capital was the *only* important method of increasing the National Dividend.

VI

The Influence on Wages of Inequality of Opportunity

Variation in Supply of Different Kinds of Labor. — The Marginal Productivity Theory seeks to answer all three questions at once. The first question it answers adequately by saying that the share of the National Dividend going to labor depends on the productivity of labor relative to the productivity of capital and natural resources, and this depends on its relative plenty or scarcity. The second problem it solves by referring to the different levels of productivity in different countries or districts, which correspond with the different wage levels. American and English cotton operatives have high wages compared with the cotton operatives of India, because they produce cotton goods of more value in a given time; agricultural laborers in the North earn higher wages than agricultural laborers in the South, because they do more work or better work. These two questions it answers; it is not much help with the third problem, the problem why different kinds of labor have different values. Its explanation is that wages depend on the relation between the demand for a kind of labor and the number of people who can offer it. Each worker's wages depend on the "productivity" of his labor, and the "productivity" of that labor compared with other kinds of labor depends on the number of people offering that kind of labor. This explanation, however, only states the problem, it does not solve it. The important question is, how is it that, relatively to the demand in each case, a large number of people can offer certain kinds of labor, while only a small number can offer other kinds. The question is the same as the question, why different standards of life exist together. What is the explanation of the fact that lawyers are few, so that their marginal productivity and therefore their earnings are high, while plowmen are numerous, so that their marginal productivity and therefore their wages are low? The plowmen could not do the lawyer's work, it is true, but neither could the lawyers plow. Similarly in the case of manual occupations: why are longshoremen many and machinists few?

Importance of Training. — The answer cannot be reached by any analysis of existing conditions; a full explanation could only be found by an exhaustive historical inquiry into the occupations under comparison. Analysis will serve merely to indicate some important influences. The difficulty of the work is the explanation in some cases; if a high degree of intelligence is required to do the work at all, the number of people who can do it will be limited. This explanation will not carry us very far. All the operations needed to supply all the ordinary needs of life have been studied and simplified, until any person of ordinary intelligence, *provided he have had the necessary training*, can do most of them. Incomes derived from work vary far more than do native ability and capacity. The opportunity of training and entry into trades is then the important influence and the fundamental reason for the difference in the wages of different occupations. Low-paid occupations are low-paid because they are overcrowded, while a high remuneration is secured for an occupation by restricting entrance to it.

The restrictions take many forms. In the case of the

learned professions the restriction takes the form of an expensive education; by their monopoly of higher education the middle and upper classes retain a monopoly of the professions — with the scholarship system as a fairly efficient safety-valve for the discontent of the excluded masses. This monopoly is further buttressed by possible fees required on entrance to such professions as the law, which handicap clerks and others who might secure the necessary education. Similarly, the higher branches of the public service are reserved for the same classes by the nature of the examination where appointment is by examination, by "influence" and class prejudice where appointment is direct. Even in industry and commerce class prejudice may close the road to the more important posts to all save exceptional workingmen. Especially in a country like England, although less so in the United States, large employers favor subordinates of their own social class, so that the workingman gets few chances of training himself for posts of direction; the middle-class boy on entering a trade is given an all-round training, the working-class boy is specialized to one subsection by the age of sixteen. In the case of manual work, the need of special skill for the better-paid occupations excludes from them the many people who have the capacity but have never had the opportunity to acquire that skill. In some cases the apprenticeship system, in a few trade union organizations, restrict opportunity to enter a trade, in the same way as educational requirements limit entrance to the professions; but here again the important influence is the expense of training. With equality of opportunity work and earnings might tend to correspond with native capacity; as it is, the distribution among occupations of the nation's capacity is almost purely accidental.

VII

Summary

If now we return to the question which formed our starting-point — how society came to put a value of just $7.50 on the work of a certain workman — we shall be unable to answer it by reference to any single principle.

We shall note first that a clear distinction must be drawn between *wages* and the *value of labor*, or, as it is more usually called, *labor cost*. Other things being equal, the more labor a man's energy, ability, training, and social circumstances enable him to give, the higher the wage he will be able to command; the less labor he gives, the lower his wages will tend to be. Hence there may be great variation in the wages of similar workers from place to place and from time to time without any variation in the value of labor, and consequently without any change in cost of production to employers and in prices to consumer.

But the value of labor also varies from place to place, from time to time, and from occupation to occupation; this variation is independent of differences in the amount of labor given by different workers, and it needs explanation. Any theory, however, that attempted to comprehend all the influences on the value of labor in a single formula would be so abstract as to be useless. Moreover, some wages are capable of no rational explanation. In the "sweating trades" there are numerous cases in which different rates of wages are being paid for exactly the same work, and similar variations are to be found in all unorganized trades. All we can do — all any theory of wages can do — is to enumerate influences and indicate their relation and importance. Our survey of past theories suggests that there are three important influences in the long run: the volume of the flow of wealth in the country of the worker; the relative plenty or scarcity of the different agents of production; the relative plenty or scarcity of different kinds of labor. While these are the chief determining influences in the long run, the chief immediate influence is the worker's conception of the standard of life to which he is entitled — by tacit agreement with his fellow-workers he will usually refuse to work at all for a wage insufficient to maintain this standard, and the consumers will be forced to pay his employer a price for the product of the work sufficient to enable the employer to pay him that wage.

CHAPTER XVIII

INTEREST AND PROFITS

I

The Distinction between Profits and Interest

Necessity for Distinction. — The words "Interest" and "Profits" are often used indifferently for the same thing; if we wish to avoid confusion we must distinguish between them. Profits are the share in the flow of wealth which goes to the owners of businesses, and are calculated by deducting the expenses from the receipts of businesses; interest is the share that goes to the owners of capital. Profits usually include interest, since the owners of businesses usually supply some, if not all, the capital used in them; they include, however, several other important elements.

Wages of Management. — First, profits usually include some payment for the work of organization, which we studied in Chapter III. The owner of a private business *works*, he gets his wages in the form of profits. He gathers together a number of specialized workers, provides them with the necessary machines and equipment, finds material to work on, and turns these isolated individuals and machines into a productive organization. The business started has to be run, the organization has to be managed, just as a machine has to be tended, and the owner-manager has to be paid by society like any other machine-tender. In a majority of cases he draws his payment for management in the form

of profits. As we saw, starting a business needs a different and a higher order of ability than running one, and the biggest profits are probably made by the starting of businesses, by discovering a new or unsatisfied want and organizing the means of satisfying it. The payment for this work may be drawn, not in annual payments, but in a lump sum, the creator of the business selling it to the public in the form of a corporation, and receiving for it, not what it cost him to build up, but the capitalized value of its earning capacity.

Profits and Risk-taking. — The second important element in profits is payment for undertaking risks, especially the risks involved in anticipating demand and supply. It was shown in Chapter IV that risks are unavoidable in a society that avails itself of the economies of the division of labor. The division of labor involves production in anticipation of demand, and fluctuations in the volume of the supply of raw material are constantly changing the value of a commodity between the commencement of the process of production and its completion. Further, it is impossible to anticipate correctly in every case what the demand will be; whenever a mistake is made in this anticipation, whenever the public want less of one thing and more of another, or something different from what has been made, there is a loss. The thing made does not fetch the price anticipated, and the owners of the business that made it bear the loss. They can bear this loss, because at other times they have made just what turned out to be wanted and got a good price for it. Profits are big when the managers of businesses anticipate correctly what the public want and will pay for, losses are incurred when their anticipations are incorrect; in the long run the profits must exceed the losses, or the business cannot continue.

Variability of Profits.—Profits act as a sort of buffer between prices on the one hand, and interest, wages, and rent on the other. Prices fluctuate owing to changes in the supply of raw materials and in the demand for finished products; the worker, capitalist, and land-owner want a steady price for their labor, capital, and land; the owners of businesses give them a steady price — regular wages, a uniform rate of interest, a uniform rate of rent, and take the price of the commodity made, making big profits if the price obtained for the output as a whole is good, and small profits or losses if the price obtained is bad. That it is the owners of businesses who take the chief risks is clear when we remember that they *have paid* for the labor, capital, and land before the commodity is finished, often before its price can be known, and if the commodity when made is not wanted and cannot be sold, they cannot recover the wages, interest, and rent expended in the production of it. As we have seen, there is a tendency to separate the work of organizing or managing production from the taking of risks. The management of businesses is put into the hands of managers and managing directors, paid, like foremen, a regular wage or salary; the risks of the market are borne by the owners of the businesses. In the most highly organized trades the separation is carried further. The businesses engaged in manufacture are relieved of the risks of the market, they work only on contract or commission, and the middlemen for whom they work specialize in the taking of risks.

Differential Advantages and Profits. — A third important element in profits is the income to be gained from any advantage over competitors; for any such restriction on competition prevents competition from beating down selling price to cost of production. When sellers compete freely and methods of production do not vary much from firm to firm, the price that any can get for their product will be kept close to their cost of production; the firm that tried to raise its price would simply drive its customers to other firms which were content with a smaller profit over cost of production. If, however, one firm in a trade has some advantage in production shared by none of its competitors, it can get the same price as they do for the product, and, producing cheaper, make a larger profit. So important are the variations in productive efficiency of different pieces of land that the income derived from land, rent, is usually treated separately from the income derived from capital; but "the rent of land," in Dr. Marshall's words, "is seen, not as a thing by itself, but as the leading species of a large genus."[1] Any process, machine or material which cheapens production gives its users a differential advantage in production and enables them to draw a "rent," so long as its use is restricted to a minority of the firms in the trade. The desire for such profits is the chief stimulus in modern industry to the improvement of organization and the invention of new processes.

Monopoly and Profits. — Similarly anything of the nature of monopoly enables the monopolist to draw profits above the average. Since buyers *must* come to him, he need not fear competitors, and is not compelled therefore to keep his price near cost of production. A patent is such a monopoly. To secure such monopoly, however limited, is the chief object of advertisement. The advertiser aims at so impressing the consumer's mind with the desirability of his article that the consumer will insist on having it, and will refuse all substitutes; then he exploits this conviction in the consumer's mind by charging more for the article than he could do if the consumer were not so determined to have it. A well-known brand or trademark, the reputation of an old established firm, a prominent situation in an important street, a special flavor in a cocoa, tobacco, or snuff, all enable the seller to obtain from the consumer a higher price than he could otherwise command, because the consumer does not adopt his usual practice of beating down prices by playing off one seller against another. The "good-will" of a firm consists in the limited monopoly the firm has of the custom of a section of the consuming public. The entangling of a poor customer in debt is a common device to secure the monopoly of his custom. All these devices have it for their object to restrict competition, and so to escape the pressure which it exerts, forcing prices down towards the cost of production.

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[1] *Principles*, 6th edition, p. 412.

In addition to interest, then, there are three important elements in profits: payment for management and organization; payment for undertaking risk; and the revenue that can be derived from any restriction on competition. The profits of a firm may consist of one or two of them, or it may include all three; moreover, profits may or may not include interest. In every case profits are the portion of the revenue of a business which goes to the owners, and are arrived at by deducting total expenses from total receipts; but expenses include different elements in the case of different types of firms. In the case of a private firm working entirely on borrowed capital, interest on capital will be an expense and will form no part of the profits; in the case of a private firm working on its own capital entirely, interest on capital will form a large part of the profits. In the case of a corporation, interest on bonds is treated as an expense and does not appear as an element in profits, while interest on common stock is not kept distinct and so forms a part of the profits, which are distributed to the common stockholders as dividends. Again, in the case of management, the proprietor of a private firm may pay himself no salary — in the case of a small firm it is very unlikely that he will — and payment for management becomes an important element in profits. In a corporation all payment for management is made in the form of salaries and regarded as an expense, so that it forms no part of profits. Payment for the bearing of risk and the revenue derived from restrictions on competition cannot be so easily distinguished from the other elements in the revenue of a business, and are always drawn by the owners of the business as profits.

Variable Significance of the Elements in Profits. — It is important to bear in mind these different elements in profits when we come to compare profits in different industries or occupations. The rate of dividend on capital is not the only thing to be considered. We must consider the difficulty and amount of work required to manage the different industries; we shall expect profits to be much higher in proportion to capital in a merchanting business that turns over its capital half a dozen times in a year, than in a railway that turns over its capital only once in ten years. We must consider the risks of the industry; if risks are great, we shall expect the rate of profit, when profits are made, to be high, in order to counterbalance the occasional losses which the nature of the business makes inevitable. To get the true rate of profit, we shall take the average earnings of a business for a number of years, and we shall deduct from the profits of successful firms the losses of unsuccessful firms. We must also know whether the trade is new; if it is new, apparent profits will be higher than they will become later, for three reasons: the risks of a new industry are less understood and the chances of loss therefore greater; the work of organizing a new business requires greater ability than the work of running an old one, and commands, therefore, a higher remuneration; and the number of firms in a new industry will naturally at first be insufficient to meet the demand. The period of high profits in a new industry is usually preceded by a period of unremunerative expenditure on experiments, advertisements, etc., and followed by a period of depression, owing to the overproduction which the high profits induced; finally, the trade settles down, and supply is so adjusted to demand that the trade as a whole makes profits which are neither exceptionally high nor exceptionally low. In comparing the profits of different firms in the same trade, we shall look chiefly to the ability of the management, especially in the matter of anticipating demand and supply; but we shall also look to see what firms have differential advantages in production, and what firms partial monopolies.

II

Why Is Interest Paid?

Profits, then, include other elements beside the earnings of capital; interest is simply the "earnings" of capital. Interest presents us with two problems: (1) why is interest paid, and (2) what determines the amount of interest.

"**Risk**" **in Interest.** — There is, however, a preliminary difficulty, which we must consider first; apparently capital earns *different* rates of interest in different employments. Pawnbrokers charge interest at the rate of 25 per cent to 50 per cent on their loans; governments borrow money at the rate of 3 per cent to $3\frac{1}{2}$ per cent; municipalities pay a little more; banks pay a low rate of interest on deposits, but may charge stockbrokers and other borrowers on call even less; common stock in a company usually receives interest at a higher rate than preferred stock, and preferred stock than bonds. Why this variation? The explanation is that "interest" in some of these cases includes elements that should strictly be called "profits," and in all the cases allowance is made for risk of nonpayment of interest or loss of principal. The pawnbroker charges in the form of interest for his labor in managing his business and the trouble he will be put to in selling the pledge if the loan is not repaid; the stockbroker gets his loan cheap, because he relieves the bank of some of the work of finding investments for its funds, and because he takes the loan on extremely inconvenient terms as to repayment. In the other cases the rate of interest varies simply with the risk run; the rate is lowest when the security for interest and repayment of principal is greatest.

Basis of Interest. — An answer to our first question, why is interest paid, is necessary if we are to answer our second question, what determines the amount or rate of interest. Interest is paid for the same reason as all other payments are made, because a loan confers a service; there are always people willing to pay interest, because a loan will enable them to satisfy their wants. The service rendered by the loan varies with the use to which it is put; there always *is* a service, because a loan is a loan of wealth, and gives the borrower for the time being the same command of wealth as ownership gives. A loan is usually spoken of in terms of money — a loan of $5,000 or whatever the sum may be — but money only measures the amount of the loan; what the borrower wants and gets is the goods and services that the money buys. Neglect of this truth has led many people to ignore the true nature of a loan; in the Middle Ages no objection was made to payment for the use of a house or land (rent), but payment for the use of money — which was only wanted in order to buy a house, land, or some other form of wealth — was called usury and made illegal. The essence of a loan is that the borrower gets the use of some of the lender's wealth, and can derive from it all the satisfactions and services that wealth gives; for this he is willing to pay. The simplest way of regarding interest is as *payment for the use of wealth,* which the owner could use himself if he did not lend it to the debtor.

Use of Loan in Production. — The commonest use to which a loan is put to-day is to assist production. With the money borrowed buildings are erected and machinery bought. By the aid of these implements of production the business man, who obtained the loan, and his staff of workers, are enabled to produce far more than they could have done without these implements; they are willing therefore to pay a portion of the product to the lender of the implements. If no medium of exchange were in use, and payments for services were all made in kind, then out of every piece of cloth made a portion would go to the weaver as wages, a portion to the capitalist who advanced the loom as interest, a portion to the owner of the land and buildings, which housed the loom, as rent, and smaller portions to all the foremen, managers, enginemen, etc., whose work is needed in a weaving factory, a portion to the firms which supplied the yarn, coal, etc., the residue going to the owner of the business as profits. Similarly in the machine shop where the loom was made, a portion of the cloth given in exchange for it would go to the laborers making it, a portion to the owner of the machines which these laborers used, and so on. In every act of production in modern industry, manual work, organizing work, capital in the form of machines and power plant, and land, coöperate and, because they coöperate, share in the product. Interest is paid for the use of capital, because the capital is productive; it enables its user to produce more than he could without it, and out of this additional product interest is paid. Where the capital is misapplied so that it produces nothing, either the profits of the business are drawn upon to pay interest on it, or, as is very often the case, no interest is paid.

A loan of wealth, obtained for purposes of production, may be of assistance to the borrower in a different way, and so induce him to offer interest for it. It enables him to get finished goods which will tide him over the time between the beginning of the manufacture of a commodity and the sale of the finished commodity. By getting the finished goods that he needs for daily use and consumption *now* he is enabled to take his time over production, and thereby produce more. He can adopt a system of very extensive and detailed division of labor, which makes manufacture roundabout and lengthy, but very productive; by being enabled to wait, he is enabled to produce more, and out of the additional product he can pay interest. It pays him, therefore, to offer to repay in the future, when he will have completed the productive operation for which he needs the loan, the whole sum advanced and interest in addition, if by so doing he can get money to buy the finished goods and the services that he needs *immediately*. A people that has no capital is forced to live from hand to mouth, and, being unable to carry the division of labor far, is materially poor.

Consumption Loans. — Not all loans are obtained for productive purposes. The most eager borrowers are individual spendthrifts and governments at war. They offer interest, though the loan will not enable them to increase their incomes and so pay the interest; they are simply mortgaging future resources to satisfy present wants. Why do they do so? Their motive is the intensity of their present need. The spendthrift is intensely conscious of his want of money *now;* he does not realize with anything like the same intensity that he will probably want money just as much in the future, when he has to repay the loan; he probably thinks that something will " turn up " before then. Any one, therefore, who will supply him with money *now* is doing him a service for which he is willing to pay. Similarly, the Secretary of the Treasury must have money for war — even a nation of shopkeepers never considers expense in deciding about war — he risks great unpopularity if he proposes any further taxation now; on the other hand, loans will have to be repaid by future generations, and a statesman incurs no unpopularity by throwing on to the shoulders of future generations the obligations incurred by his own; he therefore " finances " his war by a loan.

In every case interest is offered because a loan confers a service; for the same reasons the lender expects to receive interest. By making the loan he gives up the use of a portion of his wealth; he expects compensation. It is not enough that he will get back his wealth some time in the future; meanwhile he is being deprived of the satisfactions he could have got from its use. If the borrower uses the loan to purchase instruments of production, the lender expects a share of the product, since he himself, if he had not made the loan, could have purchased instruments of production. If the borrower uses the loan as circulating capital, the lender expects payment for this service also. Finally, he wants some interest to induce him to save. Most people prefer spending the whole of their income to saving a portion of it; present wants appeal to them more strongly than future wants. "A bird in the hand is worth two in the bush"; the promise of $500 a year hence, even if we have absolute faith that the promise will be fulfilled, is not the same to us as $500 now. Five hundred dollars a year hence will probably give us as much satisfaction as $500 now, but we do not realize that. We discount future satisfactions, and we require therefore some inducement to postpone satisfactions to the future, which is what saving means. Society needs capital; capital is not provided free by Nature in unlimited quantities like air; society therefore has to pay people to induce them to accumulate capital, and interest is the payment.

III

What Determines the Rate of Interest?

Supply and Demand Applied to Capital. — We can now approach the second question, What determines the amount or rate of interest? Interest is the "value" of the use of capital, and, like any other value, depends on the relation of supply to demand, and in answering the first question, why interest is asked and paid, we have reviewed the influences that control the supply of capital and the demand for it. The supply depends on the willingness and ability of people to sacrifice present to future satisfactions; the demand depends on the productivity of capital, and on the intensity of present need that induces people to mortgage future income in order to secure an increase of present income.

Interest and Saving. — The willingness of people to save is largely a matter of social habit, the ability to save depends on the amount and distribution of wealth. Saving always involves a sacrifice of present for future satisfaction; to individuals and communities who are poor the sacrifice is great; to individuals and communities who are rich it is small, and may even become negligible. So long as there is any sacrifice involved in saving, the supply of capital will always be less than the possible uses of capital, and interest will be necessary to keep up the supply. What influence changes in the rate of interest (or value of capital) have on the supply of capital is uncertain. A rise in the general rate of interest may in some cases induce an increase in the supply of capital; usually, however, it will probably have no such effect. The accumulation of capital is due mainly to two classes of savers: one class, the prudent or timorous people who are anxious to secure a certain income from investment, will need to save less to secure this certain income if the general rate of interest goes up, and will save more easily and rapidly; the other class, people engaged in business, who are anxious to increase the size of their business and therefore leave in the business each year some of its earnings, will be unaffected by the level of interest. In the latter class is included the important section of the community which, being determined to get rich at any cost, spends as little as it can and saves as much as it can, whatever the rate of interest. A change in the rate of interest in some particular industry, as distinct from a change in the general rate of interest, does affect the supply of capital *in that industry*. Capital is constantly wearing out and has to be renewed from gross income; it will not all be renewed if the rate of interest in the industry falls below the known rate of interest in other accessible industries. On the other hand, if the rate of interest in an industry is high, new capital will be attracted into the industry, because there is always a fund of capital awaiting investment which will be directed into the industry that seems to offer the biggest net return on the investment.

Demand for Loans. — Of the influences that affect the demand for loans, the productivity of capital is the chief; the need of individuals and governments for unproductive expenditure, though still of enormous importance, no longer normally controls the market for loans as it did before the nineteenth century. The productivity of capital is different in different countries and at different times. Capital is always used in coöperation with labor and natural resources, and as their relative proportions vary, the productivity of each varies. If the amount of capital available for industry increases without any corresponding increase in labor and natural resources, capital can be fully employed only if it is put to uses in which it is less productive than it was before. On the other hand, if labor or natural resources increase relatively to capital, capital will become more productive, because it will now be withdrawn from the uses in which formerly it was least productive and be restricted to its more productive uses. The organizers of industry, balancing labor, capital and natural resources against one another in order to find exactly the most productive combination, employ just as much capital as at the current rate of interest gives them a profit. Hence the rate of interest and the demand for capital are connected both in industry as a whole and in any single industry; a change in one produces a change in the other. If a little more capital will enable an organizer to produce more or more cheaply, he will offer more for it, *i.e.* the rate of interest will go up; conversely, if the rate of interest falls, he will employ a little more capital. It is always the productivity of a little more or a little less capital that the organizer considers, and economists therefore speak of the "marginal" productivity of capital. The competition of

lenders and borrowers in the money market tends to make the rate of interest coincide with the marginal productivity of capital; in other words, the rate of interest depends on the relation of the supply of capital to the demand for it, and the supply and demand influence each other.

Capital as Exploited Labor. — The demand for capital is explained in a different way by those economists, such as Marx, who hold the Subsistence Theory of Wages. Capital, they argue, is necessary for any productive work to-day; the owners of it, therefore, are able to force the laborers to work in return for a subsistence wage, and to take for themselves the rest of the product of industry. We have seen reasons for believing that wages to-day are not subsistence wages, and the theory seems to assume that all the owners of capital act together in industry as a class. If they did, the theory would be correct; but they compete, both to sell products and to buy labor, far more than they combine, and by competing are forced to give to the laborer more than a bare subsistence. This Exploitation Theory has, however, important elements of truth. It calls attention to the enormous social power given, especially in countries which are nominally democracies, by the possession of capital. It reminds us of the weakness, in a society which allows the values of services to be settled by the relations of supply and demand, of those members of society who have no reserve of wealth. And it reminds us of the *historical* origin of at any rate much of the capital in use at the present day. Capital in England has not too creditable an ancestry, for three of the chief sources of its growth are the private appropriation of land-values created by the growth of towns, the exploitation of slaves and Asiatics in the seventeenth and eighteenth centuries, and the exploitation of child labor in the first half of the nineteenth century. In the United States the record is a little more commendable, but there are some dark pages in it—slums, sweated industry, and child labor.

CHAPTER XIX

RENT

I

The Ricardian Theory of Rent

THE theory of Rent was given its present importance in Economics by Ricardo and his followers. They held that the value of a thing is fixed by its cost of production; they sought to apply this theory to agents of production, *i.e.* to find in the cost of production of land, capital and labor the principle on which the present distribution of income between owners of land, capital and labor is based. Hence they said that wages depended on subsistence, *i.e.* on the "cost of production" of the laborer; interest was the payment needed to induce people to save, it was the "cost of production" of capital. When they came to land, they could not adopt this explanation. They were struck by the obvious fact that land, although it has to be paid for, has no "cost of production"; man does not "produce" it, it is there before he is, and would still be there if the owners of it received nothing for its use. They had therefore to seek another principle to explain why rent is paid and how the amount of rent is fixed. They found their principle in the natural variations in the productivity of land, coupled with the fact that the most productive land is limited in quantity.

No-Rent Land. — Some land will not repay cultivation; crops could be raised on it, but the price they would fetch

would not be enough to repay the expenses of raising them. Other land will just repay the expenses of cultivation, but nothing beyond; the value of the produce is not enough to enable the farmer to pay any rent; this land was said by Ricardo to be on "the margin of cultivation." Some land, however, is so fertile that the value of its produce is *more* than enough to pay the usual rate of wages to the laborers employed on it, the current rate of interest on the capital applied to it, and the average profits to the farmer cultivating it; this surplus of product over expenses, according to the theory, is taken by the owner of the land as rent. Competition for land among farmers enables owners to secure this surplus, due not to any effort on the part either of cultivator or owner, but to the superiority of the land over the land which only just repays cultivation. Once it is in the market one bushel of wheat fetches the same price as any other bushel of the same quality, whatever its cost of production. If the natural fertility of the soil on which it was grown made the cost of production low, the saving would go to the owner of the soil; if the soil was infertile or difficult of access, so that the cost of bringing the wheat to market usually equaled the price it fetched, the owner of the soil would be able to get nothing for the use of his land.

Influence of Fertility. — Variations in productivity may be due to the differing fertility of different pieces of land or to varying advantages of situation. Just as a given application of capital and labor will give a larger return on some soils than others, so will a given application of capital and labor to shopkeeping give a bigger return on some sites than others. The *same* hat will sell for a bigger price on Fifth Avenue than on the Bowery; more business can be done with a given capital in the middle of New York than in the middle of Albany. In every case the owner of the better site can secure the additional value given to the wares of a shop by its situation or the value of the additional facilities afforded to a business by a central position. The convenient situations for offices, factories, and shops, like fertile land for agriculture, are limited in quantity; people who want them have to pay for them in proportion to their convenience.[1]

II

The Law of Diminishing Returns or Increasing Cost

Statement and Explanation. — Increasing the area of land under cultivation is not the only way in which an increased supply of agricultural products can be obtained. An additional expenditure of capital and labor on the area already under cultivation will always increase the product. This fact, however, does not prevent the phenomenon of rent, because it does not prevent recourse to inferior or less convenient soils. Additional expenditure on land already under cultivation will produce an increased yield, but the increased yield will not be proportionate to the increased expenditure. This is the Law of Diminishing Returns or Increasing Cost, on which Malthus based his gloomy views of the future of society. Successive equal "doses" of capital and labor

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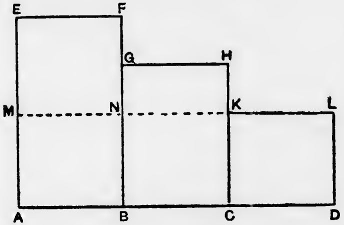
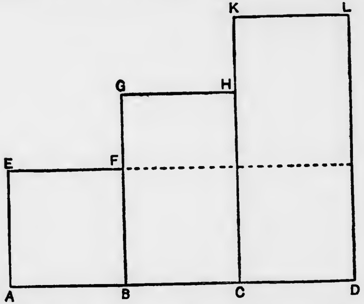
[1] The nature of rent can be illustrated by a diagram:



Suppose AB, BC, CD are pieces of land of equal extent, managed with equal ability and with the same application of capital and labor and producing wheat for the same market; owing to differences in the fertility of the soil the product is different in each case, the product of AB being represented by the rectangle AEFB, that of BC by the rectangle BGHC, and that of CD by the rectangle CKLD. If the market needs the produce of the inferior land CD, the price for the amount of grain represented by CKLD will have to be sufficient to repay his expenditure in capital and labor to the farmer who worked the land; otherwise he will be driven out of the trade and the land will go out of cultivation. Now the same amount was expended on the other pieces of land; therefore the other farmers will be fully repaid for their expenditure when they have *sold* the same amount of grain as was *raised* on CD. When they have been fully repaid, therefore, they will still have an amount of grain represented by the rectangles EFNM and GHKN to sell, *i.e.* this land gives a surplus over the amount of produce necessary to pay the cost of raising it. This surplus is rent and goes to the owner of the land. Or take this second diagram:



AEFB measures not the produce of a given expenditure of capital and labor but the expenditure needed to produce 100 bushels of wheat on AB. Then BC, being less fertile, will require a bigger expenditure (BGHC) to produce the same amount of wheat, and CD a greater expenditure still (CKLD). The price of 100 bushels must cover the expenditure on CD; therefore it will more than cover the expenditure required to produce the same amount on BC and AB. The difference will go to the owner of the land as rent. Similar diagrams would illustrate the nature of site-rents, receipts per dollar of expenditure being substituted for product in wheat, and the expenditure needed to secure, say, $100 of business being substituted for expenditure required to produce 100 bushels.

applied to land under cultivation, after a certain point in the cultivation of land has been reached, produce a diminishing return per "dose"; or, to state the same principle differently, equal increments of product can be obtained from the same land by the same methods only at increasing cost. The principle is only true assuming no improvement in the mode of cultivation, *i.e.* that successive "doses" are applied in the same form. The result of this principle is that different portions of the capital and labor employed on the *same* land produce different returns. There is an "intensive" as well as an "extensive" margin of cultivation, namely, that expenditure on the land which just "pays" at the market price of the product. Now if the market price just pays the expenses of raising this last increment of the crop, the portions of the crop raised with previous applications of labor and capital — being raised when the soil was not so near exhaustion—will afford a surplus over cost of production. They will sell for the same price as the last increment, but their cost of production, owing to the unexhausted vigor of the soil, will be less. The difference can be got by the owner of the land as "rent," since the tenant, if he objects to paying the rent, cannot secure any better return to his capital and labor in any other way; the return to his capital and labor will be less, whether he devotes it to the further working of good land already under high cultivation, or to working additional but inferior land not yet cultivated with equal intensity. The principle of Increasing Cost is of course the reason why society does not raise all its food by the intensive culture of selected land of special fertility.

Hence the two processes, increasing the area under cultivation and increasing the expenditure of capital and labor on the same area, go on simultaneously and have the same result; they mean an increased cost of production per unit of product on the margin of cultivation, they enable the owners of the land on which production is cheaper to take the difference as rent. As population grows, the margin of cultivation recedes and rents rise.

Effect of Improved Methods. — This law of Increasing Cost is not noticed, because its effects are constantly being counteracted by two influences. Improvements in transport enable crowded countries to draw on the resources of distant lands, and improvements in methods of agriculture are constantly enabling us to obtain additional supplies from the same area without increased cost or even at a less cost. The construction of the Suez Canal enabled England to import from India wheat which would not stand the longer voyage round the Cape. The railways of North America brought within reach of the English market the virgin soils of the Middle West. Similarly the gradual adoption of the four-course rotation of crops by English farmers in the late eighteenth and early nineteenth centuries enabled them to carry much more stock on their land than had been possible before. There is a constant race, as population grows, between science and this tendency of nature to give increased supplies only at greater cost; since the middle of the nineteenth century the advantage has rested with science.

Site-Value. — Site-values are subject to a tendency similar to the law of Increasing Cost in agriculture. Existing sites can always be improved, but at increasing cost. The cost of improvements in the centers of large towns illustrates this tendency; more use is got out of the same extent of land as a result of the improvements, but the cost is greater and greater as the size of the towns increases. Additional stories can be added to existing buildings to save the expense of buying new sites, but the additional accommodation thus obtained is either less convenient than that of the lower stories, or, if equally convenient, is more costly. Improvements in means of transport and communications act as a check on this tendency towards increasing cost in sites, by extending the area over which the relations of a business center can be effectively maintained. Improvements in methods of construction enable more effective use to be made of sites already in use, just as advances in agricultural science enable increased produce to be obtained from soils already under cultivation.

III

Rent and Cost of Production

Relation between Rent and Prices. — Rent, then, is due to differences in the productivity of different pieces of land, the users of which are working for the same market, differences over which the owners have no control. From this the corollary is drawn that rent does not enter into the cost of production. "Corn," in Ricardo's words, "is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed that no reduction would take place in the price of corn, although landlords should forgo the whole of their rent." The latter part of Ricardo's statement is not strictly accurate. If the landlords would forgo their rents, not to their tenants but to the State, the State could, as it were, pool all the land of the country, and sell the corn raised on the worst lands below its cost of production, compensating itself from the surplus of product over outlay on the best lands, *i.e.* rent *as a whole* enters into cost of production *as a whole*, prices as a whole would be lower if no rent were paid; but any particular rent does not affect the price of the product of the land for which it is paid, it depends on that price. Ricardo, however, had in mind not the State but the tenant, and for landlords to forgo their rent to their tenants would not relieve the consumer. The surplus of product over outlay on land that was within the margin of use would remain, being something for which neither land-owners nor land-user is responsible. Under the system of private ownership it is true to say that rents depend upon prices, not prices upon rents.

Causes of Confusion. — The difficulty that is usually experienced in grasping this principle is due to the difference between the individual and the social point of view. Most people look at rent from the point of view of the individual. They see that the farmer regards his rent as a cost, a payment made for so much productive power, just as much as the interest he pays on borrowed capital or the wages he pays for labor; he has to insist on a price for his output sufficient to enable him to pay rent, as well as interest and wages, or he cannot continue farming. His rent is a part of *his* cost of production, which determines the minimum price he can take for his total produce. From the point of view of society, however, we are not concerned with the price which the farmer must charge for his whole output, but with the minimum price for which a bushel of wheat can be got, and the minimum depends, not on the cost of production of a bushel of wheat on land which pays a rent, but on the cost of production on land which only just repays the expenses of working without affording any surplus for rent. It is this part of the total produce coming to market which fixes the minimum price society must pay, because society will not have all it wants without this part, and this part will not be produced if the price falls below this minimum. The produce of better land costs less to produce; it is sold at the same price per bushel or ton; the saving due to the superiority of the land goes to the owner of the land as rent. His rent is the result of the high price; the actual expenditure on labor and capital on his land does not affect the market price. What the tenant of the better land pays in rent is balanced by the increased amount of produce which he gets owing to the superior fertility (or accessibility) of his farm. Farmers with equal capital and skill but less fertile or accessible land get less produce from their land; they get no bigger price for the bushel of wheat, but can make the same net income, because their smaller output is balanced by the lower rent they pay for their less fertile or accessible land. From the point of view of the individual, rent is an element in the necessary cost; he must be able to meet it or he cannot continue in his business; from the point of view of society, it is not a necessary element, because the total amount of produce would not be diminished if it were not paid. The market-price is sufficient to remunerate the labor and capital employed on the worst land in use, and more than sufficient, therefore, to remunerate the labor and capital employed on the superior lands; if no payment is made for the superior lands, their quantity and quality will not be affected. Since land is largely in private hands, the owners are able to get payment for its use, but the payment they can get depends on the price which their tenants can get for the portion of the produce due to the superior fertility of their land, the tenant simply handing over to the landlord the price he receives for the additional produce.

Social Importance of Rent. — This principle, that the productive powers for which rent is the payment are independent of payment, *i.e.* are not called forth by the offer of payment, and will not languish if payment be stopped, is of fundamental social importance. Prices depend on costs of production in the sense that unless the prices paid are big enough, on the whole and in the long run, to cover costs of production, goods will not be supplied. The productivity of land for which rent is paid *is not affected by the payment of rent.* It is due to *natural* variations in soils, or to the varying advantages given to sites, not by the owners of the sites but by the distribution of population and the means of transport. If the payment of rent were stopped, the fertility of good soils, the convenience of good sites, would not diminish; for the rent-receivers did not create, and do not maintain, that fertility and that convenience. They might, as a matter

of tactics or from a "dog-in-the-manger" temper, withhold their land from use; but they would do themselves no good by so doing. If wages are not paid, on the whole people will not work; if interest is not paid, on the whole people will save less; if rent is not paid, the quantity and quality of land will not be affected. Wages have to be paid by society to maintain the supply of labor; interest has to be paid to maintain the supply of capital; the supply of land is not affected by the payment of rent.

IV

Application of the Ricardian Theory to Actual Conditions

Ricardian Concept of Rent vs. Popular Concept. — Before we develop the consequences of the Ricardian rent theory, however, we must pause to consider some difficulties in the application of the theory to actual conditions. The first difficulty is that the economist gives a meaning to the word "rent" different from its meaning in ordinary speech. In ordinary speech rent is the payment made for the use of any kind of real property; Ricardo restricted the term to the payment made for the "original and indestructible qualities of the soil." Ricardo's justification is that "rent" in ordinary speech covers payments which are different in kind. The rent of a house includes interest on the capital embodied in the house and amortization, as well as payment for the use of the land on which the house stands. Similarly the rent of a farm usually includes a good deal of interest on capital, embodied in buildings and improvements, as well as payment for the use of the bare land. In England, where it is the custom for the landlord to provide most of the more permanent improvements, as much as five sixths of the "rent" may be interest on capital. It is not too much to state that in an old country farm-land is "made," its present value being, as a rule, due hardly at all to any original fertility and almost entirely to the constant investment of capital in it. Clearing, draining, road-making, fencing have all to be done before the "original and indestructible qualities" can be utilized.

Rent, again, in the sense in which the word is used in ordinary speech, occurs only when the holder of the land is not the owner. In Great Britain, where the theory of rent arose, the custom has been for a century and a half for land to be farmed by tenants, the owners of the land supplying the more permanent forms of capital, but not taking any active part in the work of cultivation. But this system of land-tenure is exceptional; the vast majority of the world's farmers own the land they cultivate. But though no payment is made for the use of the land where the owner cultivates, the surplus of product over outlay due to differential productivity, which constitutes "economic" or "Ricardian" rent, occurs and goes to enrich the owner of the land. This peculiarity of English agriculture has influenced, one might say sidetracked, the course of economic studies. The economic condition of an agricultural population depends much more on the distribution of landed property than on the distribution of the income from land between rent-receivers, interest-receivers, and wage-receivers. English economists, however, have given much more attention to elucidating the latter problem than the former.

Effect of Absence of "No-Rent" Land. — A difficulty often experienced in studying the theory of rent is that, in some countries like Great Britain, there seems to be no land "on the margin of use," no "no-rent" land. Now there may be no land for which no rent is required in Great Britain, but such a consideration would not upset the theory of rent. The British market is served by lands outside Great Britain; modern means of transport bring into competition with British grain the produce of every habitable continent; so

that the margin of cultivation for the British market may be in northwest Canada or Australia or the Argentine. In Great Britain, where, on the whole, more capital and labor are applied and a bigger produce per acre is obtained than in any other country, the margin of cultivation would be an intensive not an extensive one. It is not, however, certain that there is no "no-rent" land in Great Britain. After allowance has been made for interest on the capital invested in permanent improvements on many English farms, there will be nothing left to represent payment for the "original and indestructible qualities of the soil." Again, land does not occur in compact blocks nicely graded. Land is let in farms, and every farm includes some good and some bad land. Payment is made at the rate of so much per acre, the acres of bad land paying something more than their economic rent, the good acres something less. Because good and bad is usually combined in this way, it is possible to quote a normal "rent per acre" for a whole district, that being the rate at which most of the tenant-farmers in the district pay for their farms.

Basis of "Productivity" for Rent Calculation. — It must not be forgotten that land has many uses, and there may be several "margins," without there being any "no-rent" land. Land may be "marginal" for building purposes and yet give a bigger return for a given expenditure of capital and labor than the same extent of land on the agricultural margin. It may be useless for agriculture and yet have a value for sport. In England, with its dense population, some use can be found for most land, and the values of land for different uses are curiously affected by the desire for land as a means of ostentation or sign of social status; more will often be paid for land to keep it idle, in the form of a park, than would be paid for the same land for the purpose of wheat-growing or sheep-farming; the "pheasant margin" may be higher than the "peasant margin."

Finally, we have seen that fertility and site-value are relative to agricultural science and the means of transport. An improvement in either of these will effect a widespread change in the relative productivity of different pieces of land. The example usually quoted is the new value for wheat-growing given to sandy soils by the introduction of turnips into the rotation of crops. Urban site-values in the United States have been greatly altered in recent years by the construction of electric street railways, subways, etc. Science is constantly lessening differences and redistributing fertility and site-values. But differences remain, and give rise to economic rent, and the Ricardian theory, in spite of all these qualifications, remains important.

CHAPTER XX

RENT (*Continued*)

I

" Rent " Elements in Wages

Complementary Relationship of Productive Agents.—Rent, in ordinary speech, is the payment made for the use of real property. We have, however, seen that the essential characteristic that distinguishes rent from other forms of income is that it is the outcome of differences which are not due to owner or user, and are therefore independent of the payment made to them. From the point of view of the payer of rent there is no difference between Land and the other agents of production, Labor and Capital. Farmers regard their rent as a payment that must be made if they are to carry on their business, precisely in the same way as the payment of wages for labor, or interest on borrowed capital. Manufacturers regard any rent they pay for the site of the mill as a cost like any other cost. The important question for the *entrepreneur* is, " How shall I get most productive power for my money? " and he expends his resources (derived ultimately from the sale of his products) on land, labor, or capital according as each increases their output. He needs all three, it is always a matter of a little more or a little less of each; so that we may say, if we like, that it is their " marginal " productivity that determines his employment of them, and therefore their value. From this point of view there is no difference between Land, Labor, and Capital; each is paid for on account of its productivity, and, if we grant the rather large assumption that the bargaining powers of land-owners, workers, and capitalists are equal, we may say that each is paid in proportion to its productivity, *i.e.* to the aid it gives in the production of value. Land, from the side of demand, is simply a requisite of production, paid for in accordance with its productivity. It is on the side of supply that the differences between land and the other agents of production occur, and the theory of rent is emphasized most by those economists who, like Ricardo, approach all questions of value, including the value of the agents of production, from the side of supply.

Differential Elements in Other Incomes. — Now the rent of land is the most obvious, but not the only, case in which an income is derived from differences in the productivity of an agent of production which are not due to the persons who supply that agent of production. A similar element can be discovered in incomes derived from work and incomes derived from capital, if these incomes are approached from the same side as Ricardo approached income from land, namely, the side of supply. The phenomenon of economic rent is most clearly seen in the case of land, because it is possible to find " no-rent " land, on the " margin of cultivation," which shows up the differential productivity of " rent " land. It may be difficult to find any marginal labor or capital, but it is quite easy to find different levels of productivity in labor and capital, differences which are not due to the persons who supply the labor or capital, any more than differences in the fertility of the soil are due to land-owners. The test of the existence of an element of economic rent in wages and profits is the same as in the case of land rent: Is the productivity of the agent evoked by and dependent on the payment for it, or is it unaffected by payment?

Labor. — The case of labor may be taken first. It is easy

to find important cases when quantity and quality of work are almost entirely independent of the payment made. Genius is such a case. The great quantity or fine quality of a genius's work is not evoked by the amount of payment; it is due to the natural endowment of the genius, just as the fine quality of the products of Champagne vineyards is due to natural endowment. In most professions there is a standard income towards which most actual incomes gravitate and with which most members of the profession are satisfied. So long as they get this standard income, the best members of the profession work irrespective of payment. Their motive is interest in their work; the best work is done for the sake of the work. Great surgeons may charge a thousand dollars for a single operation, but they would exercise just as much skill if they could get only ten dollars; the difference is a " rent," which represents society's valuation of the difference between the great surgeon's skill and the " marginal " surgeon's skill. The great surgeon takes it because he can get it, but he performs exactly the same operation for nothing in the public hospital. Members of the Civil Service of the same grade do not all do the same amount of work; they all receive the same pay, and one never hears of the hard or specially gifted workers among them demanding payment in proportion to their productivity. The same differences in productivity, without differences of payment, are common among manual workers. The manual worker, we have seen, like the professional man, demands his standard wage and does not worry much about anything more; employers can often induce him to increase his output by, say, a sixth by an increase in pay of only a twelfth. No class of worker perhaps is indifferent to pay, but productivity is seldom strictly proportionate to pay.

Variations in the productivity of workers are as great as variations in the productivity of land; to a large extent the former are as little influenced by the prospect of payment as the latter. It would be possible to frame a Theory of Wages parallel at all points with the Theory of Rent. Subsistence wages would represent the margin of production; the return equals the outlay and gives no surplus. Most workers, however, receive more than a bare subsistence. In one class of cases this is due to the investment of capital in the worker in the form of special training; in this class wages correspond to the rent of farms on which there has been a large capital outlay in permanent improvements, producing a return apart from and above any "economic rent." In another class a surplus of wages over subsistence is earned because the natural endowment of the workers is exceptional; such incomes have been called "Rent of Ability," and correspond to fertility rent in the case of land. There is a third class whose wages have an element corresponding to site rents in the case of land. This is the case of workers who owe the surplus of the incomes over subsistence to restriction of their number, owing to class distinctions, monopoly of educational opportunity, and similar causes. The "cost of production" of a doctor is not very much greater than the "cost of production" of a janitor; allowance must be made for the capital expenditure on the doctor's training, but after interest on that expenditure has been allowed for, there remains a great disparity of income. This disparity would seem to be due to the fact that though there are any number of people with brains enough to make doctors as good as the average practitioner, only a small proportion of them have the opportunity of a medical training, so that the supply of doctors is, compared with the supply of janitors, small. Such a theory of wages, reached by approaching the problem of the value of different kinds of labor, from the side of supply, is not inconsistent with the Marginal Productivity explanation of wages; it is at least as successful in bringing out the socially important influences on wages. It directs attention to the inequality of social opportunity which is

the chief cause of inequality of income, and it reminds us that much work — including most of the work that requires the finest and rarest qualities — is done from no economic motive at all, but in return for the interest and pleasure of the work, or from a sense of duty.

II

"Rent" Elements in Profits and Interest

Capital. — Different levels of productivity can be found in the case of capital also, equally unaffected by payment. The capital invested in land in so-called "permanent" improvements, once it has been so invested, gives a return fixed in precisely the same way as the rent of the land itself. The usage of ordinary speech which applies the term "rent" to the payment for any form of real property has a good economic basis. Drainage schemes, roads, fences, buildings are all like agricultural land in this, that their value depends on the prices of agricultural produce, not *vice versa*. When English agricultural rents fell after 1879 the fall was not confined to "economic" rent; it extended to all incomes derived from permanent improvements of land. Similarly the plant of an old firm often affords an income indistinguishable from rent. The income it affords depends on the price of its product; if the price is high, it will make a big income for its owner, but if prices fall it is not withdrawn from use. It will remain in use so long as the price affords any surplus over the bare expenses of labor, material, and wear and tear. When only the ordinary bare expenses are made by the sale of the product, it may be called "capital on the margin of production," or "no interest" capital.

Rent Element in Fixed Investments.—The return to all fixed capital, if a short period is under consideration, partakes of the nature of economic rent, *i.e.* it depends on prices, not prices on it. In the long run the price of the product has to afford interest on the capital, or investment in the industry will cease; similarly a rise in prices followed by a rise in the return to capital already in the industry will in the long run attract new capital into the industry; but a fall in prices reducing interest can seldom affect the supply of capital in an industry for some time, and new capital cannot be put into an industry the moment a rise takes place. There is an interval while plant in existence is wearing out or new plant is being constructed; in that interval earnings of the plant in existence depend on prices; the owners of that plant are like land-owners, they do not control the productivity of their property; if prices are low, their property brings them in nothing, if high it brings them in much. The profits and losses of business enterprise are due largely to fluctuations in the earnings of invested capital in this interval between the change in the demand for the products of the capital and the adjustment of the supply of capital to the changed demand. We have said that in the long run the price paid for the services of an industry has to cover interest at the average rate on the capital invested in the industry, or new capital will be diverted from the industry and the supply of its services curtailed. Where, however, the original cost of the plant of an industry is high in proportion to the working expenses, and the plant takes a long time to wear out, the "long run" may have to be a very long run indeed for supply to be affected, and the "short run," during which the return to the capital is governed by the same influences as the return to land, may be a long period of time. There are railways still working that have paid no dividend for a generation.

Invested capital, then, like land, has different levels of productivity, independently of payment. There is reason also to believe that the flow of new capital, from which replacements and additions to invested capital are made,

includes elements which are not influenced by the rate of interest; in the last paragraph we were considering capital in an industry, in this we consider the supply of capital as a whole. The three chief sources of the accumulation of capital, we saw, are the savings of prudent people, who wish to provide for future contingencies, the increase of business capital by men who never draw out from their businesses at the end of the year the full amount of the year's earnings, and the "savings" of men so rich that they cannot spend their whole income. Now the action of all these classes is of the nature of habit or social instinct rather than reasoned calculation, and will not be affected by a change in the rate of interest. So far as the first class does calculate exactly what they will want in the future, a fall in the rate of interest will, as Dr. Marshall points out, lead them to save more, since larger savings now are needed to give, at the lower rate of interest, the required income in the future. The second class either adopt a conventional standard of expenditure and leave in their businesses all that is over, however much it may be, once this conventional expenditure has been met; or they are anxious to get rich quick, cut their personal expenditure down to a minimum, and save as much as they possibly can, whatever the rate of interest. The third class can hardly help saving. It is true that the rate of interest controls the supply of capital in any particular industry, it is not true that it is the determining influence in the supply of capital as a whole.

Significance of Ricardian Theory. — The difference, then, between the return to land and the return to labor and to capital is not so great as Ricardo suggested. The Ricardian analysis of rent can be applied to wages and to profits and interest. The difference between land, labor, and capital in this respect is one of degree only. There *is* a difference. It is not, to repeat, on the side of demand; the demand for all three agents of production is due to the assistance they give to production, and the payment that will be offered will tend to be proportionate to the amount of that assistance. The difference is on the side of supply and amounts to this, that the supply of different kinds of land is much less under the control of man than the supply of different kinds of labor or capital; it is more difficult to increase the supply of land for a particular use than it is to adjust the supply of labor or capital to a change in the demand for them. The rise of each new generation gives an opportunity for the readjustment of the supply of labor to changing needs, and this readjustment is always going on; in much the same way the constant wearing out of capital and the accumulation of new capital enables a constant readjustment in the application of capital to changing needs. But the difference is one of degree only; the supply of labor and capital are not entirely under the control of their owners, the supply of land is not entirely out of the control of man. " Capital " merges into land in practice; an expenditure of capital on transport is equivalent to increasing the supply of land, and there is a continuous gradation from the return to an investment of capital on a drainage scheme, which is indistinguishable from land rent, to the *extra* return on capital invested in a stock of mourning goods when a death in the royal family creates a sudden demand for them. In each case the return depends on the price, the price does not depend on the cost of the capital; in the case of the drainage scheme that will always be the case, since drainage schemes last as long as land; in the case of the stock of mourning goods the differential value soon disappears, since the supply of mourning goods lends itself easily to rapid expansion and contraction to meet changes in demand. In fact *the Ricardian Theory of Rent is not so much a new explanation of land incomes, as a new approach to the problem of distribution as a whole.*

Value-output and Rent. — There is another aspect of rent of importance from the point of view of society. The

rent of land is due to the superior productivity of some land over other; and the superior land enables the user to obtain a bigger return for the same expenditure of labor and capital. Now this bigger return may take the form of a bigger output, as in the case of fertility rent; but it may also take the form, not of an increase in the output, but of an increase in the *value* of the *same* output — as in the case of the hat which has a value of five dollars on Fifth Avenue, and only two dollars on the Bowery. The "productivity" for which rent is paid is not necessarily the same thing as output; it is productivity of *value*, not productivity of *wealth*. The capital and labor employed on the Fifth Avenue site bring in a bigger return than the capital and labor employed on the other site, not because *more* hats are produced in Fifth Avenue, but because each hat produced has a greater value than the same hat would have if sold anywhere else. This high value is due to the relative scarcity of Fifth Avenue hats; the number of Fifth Avenue sites for milliners' shops is *limited*, the demand for Fifth Avenue hats is very great, therefore Fifth Avenue hats have a high value, and Fifth Avenue sites for milliners' shops command a high rent.

Artificial Scarcity and Rent. — In every case of rent which we have considered, the payment of rent is due to the limitation in quantity of the agent of production paid for. Fertile land pays a higher rent than infertile land because it is scarce relatively to the demand for it; central position pays a high site-rent because in every town only a few sites are central; exceptional ability commands exceptional payment because exceptional ability is rare; mourning goods, on the death of a member of the royal family, command a value far above their cost of production because they are scarce relatively to the suddenly increased demand for them. In all the cases we have considered so far, however, this scarcity relative to demand is due to nature, the distribution of population, or changes in demand; the scarcity has been due to causes beyond the control of any individual. A definition of rent that would cover all the cases considered so far is, "Rent is the payment made for an agent of production which has a scarcity value due not to the owner or user of the agent, but to natural or social causes beyond any individual's control." Scarcity, however, may be artificial; the supply of a commodity or a service may be deliberately restricted when the supply can be controlled. When this is done, the commodity or service will acquire a scarcity value; the capital and labor employed in supplying it will have produced an amount of value greater than that produced by the same amount of capital and labor employed in a market where suppliers compete and do not limit supply. Now "rent," Ricardo says, "is always the difference between the produce obtained by the employment of two equal quantities of capital and labor." Scarcity and monopoly values of all sorts, then, are akin to Ricardian rent. The motive of artificial limitations of the supply of anything is to secure on the capital and labor supplying it a higher return than could be obtained if the supply were not so limited. The test of Ricardian rent can be applied to scarcity and monopoly incomes; the output of the capital and labor employed in one of these monopolies is not proportionate to the payment for the product and will not be checked if the price falls; it may even be increased, since at lower prices a larger output will be needed to secure the same total profit. A large part of profits, therefore, are similar in their nature to rent; for, as we saw in Chapter XVIII, in modern business restrictions on competition play an important part in the creation of profits.

III

Social Implications of the Ricardian Theory of Rent

Rent as a Stimulus to Production. — The social importance of the Ricardian Theory of Rent should by this time

be clear. It points us to a distinction in income between those elements which evoke and stimulate production and those which do not. The owners of the agents of production can get for the use of those agents payment in proportion to their productivity, and their productivity is all that concerns the *entrepreneur* who uses them. Society is concerned with the further question, how much of these payments affects productivity — to what extent is the output of the agents of production unaffected by the amount of payment? Ricardo showed that the productivity of land was largely independent of the payment made for land; we have seen that to a slighter degree the productivity of labor and capital is independent of payment; to use Dr. Marshall's phrase, wages and profits as well as rent contain elements which are not part of "the necessary supply price" of labor and capital, that is to say, are not payments that society must keep up if it is not to check production. The distinction is of the utmost importance in framing a general social policy. The policy of *laissez-faire* and the rigid maintenance of the so-called "Rights of Property" were based on the view that *all* payments evoked a response in production, and that competition kept the payment of every agent and every individual that contributed to production somewhere near subsistence level. The Ricardian analysis of distribution indicates how large is the proportion of the flow of wealth which could be diverted from its present recipients without at all affecting the volume of the flow of wealth. The distinction he points us to, between income that does and income that does not evoke production, must be a deciding consideration in any judgment on the economy of the present economic organization as a whole.

The "Single-Tax." — A practical use of the distinction can be made in taxation. Taxes may be regarded as the price paid for the services of the State; they cannot, however, be charged to individual citizens in proportion to benefits received; the State therefore levies payment on the whole community, on principles of practical convenience rather than of abstract justice. It is suggested that taxes should be concentrated on rent and the other elements of income similar to rent; the argument for this is that rents are payments for productive power which is not due to the efforts or sacrifices of the rent receiver, and which will not be affected by a reduction in the payment. The followers of Henry George go further and advocate a single tax on the rent of land, on the ground that rents, not being the creation of any individual, should not be the property of any individual, but of the State.

Objections. — In its extreme form there are grave objections to this proposal. Though no individual may have created the rent-producing capacity of land by his labor, a great many individuals have *paid for* that capacity with the produce of their labor. Society has allowed rents to be treated as an ordinary investment; the State has given no warning that it regards the investment of $500 in land as in any way different from the investment of $500 in United States or Railway bonds, and to subject a man's income to a special tax, merely because he put his money into land instead of into government or Railway bonds, may be expedient and may even be necessary, but has no basis in justice. Further, rents are capitalized every time the property that yields them changes hands, and the present receivers of rents are frequently receiving only the current average rate of interest on their investment; as we have seen all along, from the point of view of the individual investor there is no distinction between rent, wages, and interest. Moreover, the rent of land, as the term is used in ordinary speech, is not all "economic rent"; a large part of it is interest on capital embodied in permanent improvements of the land, and in practice it is extremely difficult, sometimes impossible, to distinguish between the two sources of a given income. Economic rent, again, is not confined to incomes from land; wages, fees, and salaries, to some extent, and profits to a very large extent, include elements indistinguishable in principle from Ricardo's rent. Finally, if taxes are the price paid for the State's services, it is doubtful whether it is wise to exempt from all payment any citizen who benefits by those services, as would be done if Henry George's proposals were adopted; taxes are the chief source of an interest in politics and the chief stimulus to a sense of political responsibility.

Economic Rent and Fiscal Policy. — In spite of these difficulties in its application, the distinction between economic rent and other kinds of income is of importance to finance ministers. It must always be a principal aim of sound taxation to raise the money needed without checking the production of wealth, and this aim can be attained only by concentrating new taxation on the rent elements of private income; these elements are payments for productive powers which are not evoked by payment, and which therefore will not be checked by taxation; the other elements are evoked by payment and will be checked by taxation. The least amount of interference with legitimate expectations is involved by appropriating rents in capitalized form by a tax on unearned increments and taxes on inheritance. Land is not the only form of property subject to unearned increment, just as land-rent is not the only form of income that contains an element of economic rent; but, unfortunately for the owners of the land of a country at the time when the taxation of unearned increment is first introduced, land is the form of property on which unearned increment can be most easily detected, measured, and taxed. The profits of speculation on the Stock Exchange are just as much unearned as the increment in the value of urban building sites; unlike the profits of speculation on produce markets, they represent no service to society; and, in amount, they must be as great as the unearned increment on land; but they are not so easy to "get at" as the unearned increment on land. As the requirements of the modern State grow, then we may expect attempts to concentrate taxation more and more on economic rent of all forms, wherever it can be detected, and on the large incomes which, it may be presumed, contain the biggest element of economic rent. And the tendency is expedient, since it is the only way of raising additional taxation without checking the increase in wealth. If we take into consideration the existing inequalities of wealth, it has an additional justification, as tending in a slight degree to correct those inequalities; the injustice of selecting one class of investments for heavier taxation than the rest may be added to the list of inconveniences which arise from the incessant conflict between the rights of private property and the interests of the community.

CHAPTER XXI

THE STATE AND THE ECONOMIC ORGANIZATION

I

Private Property and Freedom of Enterprise

The State and Economic Organization. — The economic organization that we have been studying is distinct from the political organization of society, and largely independent of it. Economic relations overstep political boundaries and have become world-wide, while States are relatively local; commerce is cosmopolitan, while States are, roughly speaking, national. The economic organization achieved this independence in spite of the efforts of States, which sought during the period of the Mercantile System to control the flow of trade and the distribution of labor and capital among different employments. Adam Smith's *Wealth of Nations* showed that the State, at any rate in the United Kingdom, had failed in this endeavor. The law hampered, but did not direct industry and commerce; the organization of industry and exchange and the distribution of the product were settled by contracts between individuals, and controlled by forces other than the laws of Parliament and the executive powers of the Sovereign. To-day, as in Adam Smith's time, the State has only a subordinate influence over the organization of production and the distribution of wealth. The organization is much the same in countries in which the form of State varies, and we have been able to study the economic organization so far without taking account of the political organization. While, however, economic and political organizations are distinct, there is nothing in the nature of either of them to prevent the State from undertaking economic operations. While economic organization and political organization are largely independent of each other, the degree of their independence varies from time to time and from State to State, and is never complete; the two react on each other, and wide differences of opinion exist as to the proper relation between them. It is necessary therefore to consider, however briefly, what are the relations between the State and the economic organization to-day, and to examine the policy of which the existing arrangement is the expression.

The Nineteenth Century View. — During the nineteenth century the view of the relation of the State to economic organization that had most influence was the view that they should be as distinct and independent as possible. The obsolete and hurtful character of the State-regulation existing at the beginning of the century discredited State-regulation as such; Adam Smith had shown that the organization of industry and commerce was a spontaneous thing, owing little or nothing to the direct action of the State, and that it had in it a sort of self-regulating principle, which made it unnecessary for the State to interfere in the public interest. This self-regulating principle is the action of competition. A belief in its beneficent effects[1] was the mainspring of the movement to "free" industry and commerce from all State "interference," and is the ground of most opposition to State-regulation to-day. Although an elaborate system of laws and administrative machinery regulates industry to-day — the movement in the first half of the century for the abolition of the obsolete system of State-regulation having been succeeded in the second half by a movement to impose

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[1] "All systems either of preference or restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord." — *Wealth of Nations*, Bk. IV. ch. ix.

new regulations adapted to the new conditions of industry — society still relies on competition, rather than on direct State action, to secure harmony between private and public interests. The organization of production is on the whole effected by free contracts between individuals, the distribution of the product is left by the State to be determined by the bargaining of the individuals who directly or indirectly take part in production.

The Present Social System. — The present social system in regard to economic activities is based on two institutions, *property* and *freedom of enterprise*. By the institution of property (or private wealth) society allows a person the exclusive use and control, and even the disposition after death, of any wealth that person may acquire; by freedom of enterprise society allows a person to seek wealth in any way that person chooses. There are limits both to the rights of property and to freedom of enterprise embodied in the law; the more obvious forms of theft and violence are excluded from freedom of enterprise, and taxation is an obvious encroachment on the exclusive control of wealth by individuals. Still, the portion of the economic field over which property rights and freedom of enterprise do not operate is small in comparison with the portion over which they do operate; the *presumption* in the case of any form of wealth is always that some owner has the absolute control of it, the *presumption* in the case of any trade is always that any individual is free to enter it. The nature of these institutions is brought out by a comparison with medieval society, in which the idea that any individual should have exclusive control of land or freedom to enter any trade or occupation he liked would have been thought ridiculous. Property, that is, the exclusive use of wealth, is the prize offered by society to induce individuals to compete in producing wealth; freedom of enterprise is the device on which society relies to insure that no one shall acquire wealth without competition.

Contract. — The economic organization is built up by the free enterprise of individuals seeking wealth. Each is free — so far as the State is concerned, and with certain exceptions to be mentioned later — to apply his labor or his land or his capital to any branch of production and in any way he thinks best; each is left by society to get in return, by bargaining, without interference of the State, what share he can of the product. Economic relations depend, according to the theory of the present organization, not on status but on contract. The State may lay down conditions, which must be complied with before it will enforce any contract, and some contracts, such as a gambling debt, it may refuse to enforce at all; but it does not ordain what shall be produced or who shall produce, nor does it decide how the product shall be divided; it does not as a rule fix prices or wages, the rate of interest or the amount of rent, and only in exceptional cases does it directly organize production.

Market-value as the General Guide. — The indicator that production follows, the guide that tells individuals to what purposes to apply their labor or their capital or their land, is *market value*. Value, we have seen, depends on the relation of supply to demand. When the value of a thing goes up, it indicates either that the demand has increased, or that the supply has fallen off, and in either case that more is wanted; the higher value offers to producers higher remuneration, and it is assumed that under a system of free enterprise individuals can be relied on to increase the supply. When the value of a thing falls, it indicates either that the demand has fallen off or that the supply is in excess, in either case that less is wanted; it is assumed that the fall in value will warn people to apply their productive powers to other objects and so check the supply. Society — since normally it makes no other provision for directing its productive forces — assumes that value is an adequate indicator of wants, and that with this automatic indicator nothing further is required to secure the most economic application of productive forces to need.

Regulatory Effect of Competition. — For regulation of production and distribution in the public interest, society relies on *competition*. We have already examined competition in Chapter VI. We saw there that it works in two directions. Trades, firms, and individuals compete to *sell* their product or the productive powers of their land, labor, or capital; they compete for custom, which means for a share of the wealth of society in exchange for what they have to offer. Similarly individuals, firms, and trades compete to *buy;* they compete with one another in offering of their wealth for the finished or partly finished products of industry or the productive powers of land, labor, and capital. The competition to sell tends to keep down prices, and also wages, interest, and rent, which are the price paid for the services of labor, capital, and land; it tends to force prices down to cost of production, and this effect of competition is the chief influence on which society relies to protect the consumer against exploitation. The competition to buy tends to force prices and wages, interest, and rent up; and this effect of competition is the influence on which society relies to secure fair treatment of the producer and a just distribution between different kinds of producers and between the different agents of production. If any trade or class of producers is getting more than it ought, the high value of its product is expected, under the system of free enterprise, to attract competition, which will force it to accept less; if any is getting less than it ought, the low value of its product is relied on to check production, divert labor and capital elsewhere, and so force up the value of the product and the remuneration derived from it. All are compelled by the fear that their competitors will undersell them constantly to adopt the latest methods and equipment. At the same time an incentive to make experiments and discover improved methods exists in the higher margin of profits which the innovator draws in the interval between the first application of the new method, while prices are at their old level, and its general adoption, when the reduced cost of production all round brings prices down. In the long run, however, competition gives the benefit of improved methods to the consumer in the form of reduced prices; and since competition to sell is usually stronger than competition to buy, the free play allowed by society to competition works on the whole in the interest of the public as consumers rather than as producers. Because society normally relies in this way on competition for regulation of production and distribution, the phrase "the present competitive system" is a just description of the present economic organization.

II

Regulation and Supersession of Freedom of Enterprise by the State

State Interference and the Producer. — Experience, however, has shown that society cannot, without bad results, leave production and distribution entirely to the regulating influence of competition. There has been a steady growth of State interference with industry ever since the doctrine of noninterference was first promulgated. In the early factories competition, coupled with the defenseless condition of the workers, tended to make the worst conditions of employment into the standard conditions. The abandonment of sanitary conditions, hours of work, speed of work, exposure to risk of accident from machinery, and the age of the workers to the regulation of competition, made hells of mines and factories, and compelled the State to interfere in defiance of any economic principles; conditions in domestic workshops were probably just as bad, but the evils were not so obvious and the Government of the United Kingdom dealt with social evils not when they became acute, but only when they achieved notoriety. Hence arose Factory Legislation, "that first conscious and methodical reaction of society against the spontaneously developed form of the process of production," as Marx calls it. Conditions of employment are now regulated by the State in innumerable ways; the contract of employment has become a "conditioned" contract, a contract, that is to say, which the State will not recognize and enforce, unless it complies with certain conditions laid down in statutes — as to sanitation, ventilation, fencing of machinery, hours of work, age of the workers, and in some cases medical inspection, and even wages. This interference by the State does not supersede private enterprise, and does not abolish competition; it merely places limits on the freedom of private enterprise and imposes some limiting conditions on competition. The difference between the unregulated factory industry of the early nineteenth century and the regulated industry of to-day is the same as the difference between a fight in the street and a fight in the ring under Queensberry rules.

State Interference and the Consumer. — Just as the State has been forced to interfere with freedom of enterprise and regulate or supplement competition in the interest of producers, so it has been forced to interfere on behalf of consumers. Normally society leaves the quality of commodities to be maintained by competition, the theory being that consumers will exercise a sound judgment and purchase the products of those firms that give the best quality at a given price. In practice consumers do not always exercise this judgment; they consider price rather than quality, often they have not the knowledge needed to judge quality, and the effect of competition is at least as often to beat quality down as to maintain it and reduce price. The State has therefore imposed a sort of minimum quality in the case of certain services. Freedom of enterprise in the medical and legal professions is restricted, and those only are allowed to practice who have satisfied the conditions as to training, etc., laid down by the professional associations to whom the State has intrusted this regulation. In adopting this method of securing the regulation of the professions and the quality of the services, the modern state is imitating the mediæval municipality, which used the same device with the same object, by intrusting the regulation of the crafts to privileged guilds. In the case of the chief articles of food the State has regulated their sale by Pure Food Laws, and inspects them to see that they are fit for consumption and that they are what they profess to be. The inspection of weights and measures is a similar "interference" to protect the consumer. The restriction of the sale of alcoholic drinks to individuals specially licensed has a slightly different motive; it is not intended to secure the quality of the drink, so much as to insure the collection of revenue and to restrict the scope of the sale of intoxicants.

The Tariff. — The interferences with freedom of enterprise which we have examined so far have been based partly on economic grounds, partly on grounds of morality or general social advantage. The wholesale interference which Protection, using the word in its special sense as the opposite of Free Trade, involves is justified partly on economic and partly on political grounds. Statesmen have felt dissatisfied with the cosmopolitan tendencies of commerce, and have sought to make commerce national by protective tariffs; in the United Kingdom, where such a tariff does not exist, the movement to create one derives a large part of its force from the desire to make the economic organization of society in the British Empire correspond with and support its political organization. The more usual ground of protection is, however, not political but economic; it consists in a disbelief in the necessary identity of private and public interests in economic matters, and a belief in the necessity of positive control by the State, instead of the automatic control afforded by competition.

State Interference with Monopoly. — There are, however, an increasing number of cases in which the State has found itself forced to depart from its usual rule and to supersede private enterprise altogether. One case is monopoly. There are certain industries, which we examined in Chapter VII, in which efficiency can be secured only by monopoly. In such cases the State cannot rely on competition to regulate private enterprise, since competition is technically undesirable if not impossible. Either, therefore, the State has to devise very stringent control of private enterprise, or to supersede private enterprise altogether; the tendency, as we saw, is for the State to supersede private enterprise, since only in that way can it be sure of complete control. Public utility services, railways, and postal and telegraph organizations between them represent a considerable proportion of the world's productive capacity; they all tend to be taken over and worked by the State instead of being left to private enterprise. If the tendency of the State, national and local, to become a large land-owner for similar reasons, be taken into account also, it will be seen that the exceptions to private enterprise are becoming almost as important as the rule. And this revolution is being achieved, not by any abrogation of the rights of property, but simply by the State acquiring this property by the ordinary method of purchase, usually with the proceeds of a loan. The State is a legal person, just like any individual or corporation, and can acquire property and exercise enterprise just like any other legal person. Although the State has taken over only technical or natural monopolies, the Trusts have given the State an important object lesson in the waste of divided control in competitive industry, and the economy of centralized control.

Education. — A second case in which private enterprise has been superseded by State enterprise is the case of certain services, now among the ordinary functions of government but formerly left to private enterprise, of which education will serve as the type. Within the last two generations the

State has made itself responsible for most kinds of education. It was forced to take this step, because education, though socially desirable, is not a thing that people are very willing to pay for. Even the schools of the rich cannot always pay their way, and have to appeal to the charitable public, like any vicar of a slum parish, for aid in the form of endowments. If every one received no more education than he or his parents were willing to pay for in an unsubsidized market, few would learn more than the three R's. Education is a service which will not be forthcoming in the quantity and quality that are socially desirable, if society relies on the system of free enterprise regulated by competition. Sanitation and highways have similarly been taken over by the State from private enterprise. The care of sickness is on the border-line, the State having made itself responsible for the treatment of infectious diseases, while it leaves others, except for subsidies, under Compensation Acts, to be dealt with by private enterprise and charity.

State Aid to Charity, etc. — Charity, or " voluntary effort," is a sort of compromise between private enterprise and State-action. When a want of obvious social importance is left unsatisfied by private enterprise — because the people who suffer the want cannot afford to pay for the satisfaction of it — charity will step in and mitigate the unwillingness of the State to secure the social well-being. Such voluntary organization is a departure from the principles of the " competitive system," just as much as is State-action; considerations of expediency and convenience rather than considerations of principle determine whether a community shall act in these cases through voluntary organizations or through the State. A complete list of the services, which it does not pay private enterprise to offer and which have therefore to be provided either by charitable gifts or by the State, would be a long one and would include some of the most important of services. Education, as we have seen, belongs to this class. So does research. Universities would be in a poor way if they had to depend on the payment made for their services by those students who hold no scholarship or other subsidy. The Churches would not be much better off. Art does struggle along, thanks to the social convention that requires the very rich to exhibit a portion of their riches on their walls; but artists have terrible competition to face in the pictures of their dead predecessors, the Old Masters, especially in America. Left to the ordinary laws of supply and demand, the cult of beauty, the pursuit of knowledge, and the service of religion — perhaps one should say religious organizations — would all languish.

III

Taxation

Finally there are those services, the ordinary functions of government, that have never been left to private enterprise. The State exists because individuals living together in a society want services which can be provided only by the organization we call the State. They want laws to delimit their rights and a sovereign to enforce those laws, to maintain order, and to defend the State against attack from outside. Existing for these fundamental purposes, the State proves to be the most convenient organization for supplying many other services, so that it is impossible to set any hard and fast limit to the functions of the State. Now the services of the State, whatever they may be, cost something to provide, and have to be paid for; *taxes* are the price we pay for the services of government. Government services differ from other services, first because they cannot as a rule be measured and allocated to individuals; secondly, because we are compelled to accept them whatever the charge made. Hence governments cannot as a rule charge individual prices or fees proportioned to the benefit conferred, and they are not subject to the check on incompetence and extravagance that attends private enterprise in loss of custom and eventual bankruptcy; the individual (if he is wise) decides what he will spend by the amount of his income, governments decide what they will spend first, and then fix their income to suit. To deal with the second difficulty and provide a check on extravagance, representative control of public finance has been devised; to deal with the first and secure a just allocation of the charges of government, principles of taxation are needed.

Characteristics of Good Tax-system. — Principles of taxation have been classified under two heads, *Administrative Precepts* and *Political Principles.* Under the first head come certain requirements of Government. Government requires a tax-system first of all to be *productive;* hence a finance minister will be very reluctant to relinquish on any grounds of political principle a tax to which people have become accustomed and which brings in a large income to the Treasury; and, on the other hand, he will be willing to forgo small receipts that take a great deal of collecting. Secondly, it requires a tax-system to be *certain;* the yield must be easily calculated and the incidence certain and reliable, or the intentions of the Government will be frustrated. Thirdly, it requires a tax-system to be *elastic;* the system should contain some taxes, the rate of which can be readily varied to meet sudden and exceptional demands for Government expenditure. Under the same head of administrative precepts come certain requirements of the tax-payer. The first is again *certainty;* the payer should know exactly how much, when, and where he will have to pay. Uncertainty is a check upon industry, and it makes the burden of taxation more grievous, since an unexpected burden cannot be anticipated and provided against like a certain one. Secondly, the payer requires a tax to be *economical; i.e.* it should take from the tax-payer's pocket as little as possible over and above what it brings into the treasury. Protective duties are uneconomical, since the consumer has to pay an enhanced price, not only on imported articles which are taxed, but also on home-manufactured articles which are not taxed. Thirdly, the payer requires *convenience* in a tax; a tax should be levied at the time and in the manner most convenient to the payer. The advantage of the system of raising revenue by indirect taxes on luxuries is that it leaves the payer free to some extent to choose the time and amount of taxation he will pay. Of these administrative precepts certainty is the most important. Society can adjust itself to almost any burden if the burden is definite; any uncertainty prevents this process of adjustment. Hence the saying "An old tax is no tax," and hence the known reluctance of finance-ministers to remit an old tax, however logical such action might seem.

Political Requirements. — Of the political principles, on which a tax system should be based, the most important is the principle of *justice* or *equality.* Unfortunately it is not agreed in what justice or equality consists. One interpretation that suggests itself is taxation according to *benefit;* but the benefit that accrues to any individual from the State cannot be measured. Another is that taxation should be *proportional* to income; this was suggested by Adam Smith, who said, "The subjects of every State ought to contribute towards the support of the Government as nearly as possible in proportion to their respective abilities, *i.e.* in proportion to the revenue which they enjoy under the protection of the State." Ability to pay, however, is not, as Adam Smith assumed, proportional to income. Taxation proportional to income would mean inequality of sacrifice, since, in accordance with the principle of diminishing utility, a tenth part of a small income represents a much greater satisfaction than a tenth part of the larger income. Hence *progressive* taxation is proposed; a tax system which takes an increasing proportion of income as the income gets larger would secure something like equality of sacrifice. Another interpretation of justice in taxation is *faculty*, or ability to pay, a compromise between proportional and progressive taxation; so far as there is any principle in existing tax systems, it is probably the principle of " faculty."

Necessity for Compromise. — Whatever interpretation be put on the principle of justice in taxation, it would probably be regarded as impractical and visionary to base a tax system exclusively upon that principle. Hence finance ministers are urged to have regard also to the effect of the tax system on the flow of wealth. The ultimate source of all revenue is the national income, and from the purely economic standpoint a tax system should be so devised as not to reduce the national income or check its growth; taxes should be levied where they will not reduce efficiency. This end can be achieved by taxing rents, and we have already discussed the principle in Chapter XIX. These " principles of taxation " are indefinite and often conflicting. The best tax system must be a compromise between them; existing tax systems are based on no principle, and can be understood only by reference to the historical circumstances under which they grew up.

To sum up: society has departed very widely from the strict rule of noninterference with industry by the State; indeed, the policy of noninterference was never carried out logically by any State. In the United Kingdom the beginnings of Factory Legislation, the type of the new State interference, were established in the practice of the State before the Corn Laws, the type of the old interference, were repealed. In the United States the doctrine of noninterference never got a strong foothold. While, however, State interference is general, the direct supersession of private enterprise by State action is still the exception. If we ask for a brief description of the present social system in its economic aspect, " competitive " is still the best we can find; if we look for a rule or principle on which the system is founded, we find it still in

the separation of economic organization from political organization. As a rule and in the main, society still relies for the organization of its economic activities on private enterprise, with private property for incentive and competition as regulator.

CHAPTER XXII

THE STATE AND THE ECONOMIC ORGANIZATION
(*Continued*)

I

The Assumptions of the Present System

THE attitude of society to the economic organization, which we studied in the last chapter, is subjected to a large amount of criticism. This criticism is usually combined with and dependent on the propaganda of some alternative system or policy, and as such falls outside the scope of this book, which has for its object merely the elucidation of the present system and not the advocacy of some alternative system. The present system, however, although it is the outcome less of the application of principles to the problem of social control over the economic organization than of the general neglect of the problem by statesmen, makes certain general assumptions, on which it depends for justification; and it falls within the scope of our scheme to bring these assumptions into the light and examine them. The assumptions seem to be four in number.

The Adequacy of Self-interest. — The first is that individuals in their economic relations can be relied on to pursue their own interest, and that their action will be rational and informed. It is only on that assumption that consumers can be expected to seek out and give their custom to the producers who can satisfy them best, to play off competing producers

against one another and so keep prices down towards cost of production; it is only on that assumption that producers can be expected to bargain and secure the full value of their services.

Competition and Survival. — The second is that competition in industry will result in the survival of the socially fittest. No one denies that competition produces hardships for individuals; such hardship is justified only if competition secures for society the elimination from industry of incompetent or dishonest *entrepreneurs* and the survival of the fittest.

Property and Service. — The third assumption is the most important and may be put thus: that *as a rule* private wealth or property will be acquired only by service and, conversely, that services will be induced by the possibility of acquiring private wealth, so that it will be the private interest of some one to supply every service in which there is a public interest. Only on this assumption is society justified in leaving the distribution of wealth, a social product, to be settled by private contracts between individuals; only on this assumption is society right to restrict the activities of the State, and to lay the *onus probandi* on the advocates, instead of on the opponents, of any extension of the State's activities.

Market Values and Social Values. — The fourth assumption is that market values correspond roughly with social values, and are an adequate indicator of need for production to follow. We must conclude that value is regarded as an adequate indicator of need, since the greater part of production is left to follow that indicator; if the value of a thing goes up, more labor, capital, and land will be applied to producing it; if its value goes down, less will usually be produced.

Like most of the principles on which statesmen act (or more usually refuse to take action) and citizens vote, these assumptions are largely unconscious and seldom formulated.

II

The Assumption of Rational Self-Interest

That the first assumption, if true at all, is subject to exceptions, has been recognized by society. Pure Food Laws have been passed, because purchasers do not always scrutinize carefully the goods they purchase, and Acts to compel the fencing of machinery have been found necessary, because workers are sometimes so irrational as to take unnecessary risks. The exceptions, however, are much wider than the State has recognized, and the principles on which existing restrictions on freedom of enterprise have been based would justify much more extensive restrictions.

Controlling the Consumer. — If purchasers were always rational in their actions, producers would be able to secure their custom only by offering a better article at the same price as their competitors, or by offering the same article at a lower price. In practice these are not the only methods adopted to secure custom. Consumers are open to be influenced, their action is not always rational, and it is not at all unusual for a firm to spend as much in selling its product as in making it. The expenditure on advertising in the United States was estimated a few years ago at $600,000,000 a year. The object of it is to induce consumers to purchase commodities, which, if left to themselves, they would not purchase. Advertising is only one method of inducing purchasers to buy, when on purely rational grounds they would not buy; the employment of travelers, expenditure on surface finish and fancy wrappings, the constant introduction of novelties that have absolutely nothing but their novelty to recommend them are all examples of the great waste of productive capacity which the irrationality of purchasers invites. Competition constantly tends to increase it, since if one firm in a trade adopts an advertising device all competing firms must follow suit; the result is that all draw level again in competing power, while so much effort that might have gone to reduce cost of production and prices is wasted, so far as the consumer is concerned. The inertia which leads people to buy from the nearest shop, or from the shop they have always bought from; the feeling of friendship which leads firms and individuals to maintain economic relations, even when more advantageous terms might be obtained elsewhere; the ignorance that makes consumers eager to purchase anything for which a fashion can be created; all these go to show that the self-interest of consumers is as little to be relied on as their reason. At the most, we can only say that competition among sellers will *tend* to protect consumers against exploitation; custom, ignorance, and the persuasive arts of salesman and advertiser will often prevent the tendency from becoming a fact. Competition will *tend* to work in the consumer's interest, but producers spend large sums in getting control of the consumer.

Modification of Self-interest. — Even less true is it to assume that producers will be actuated in economic affairs exclusively by motives of material self-interest. The use of land and the expenditure of capital on land in England have for two centuries at least been influenced by political and social, as well as by economic considerations; good agricultural land has been turned into parks, and landlords have made it a practice to remit in bad seasons a portion of the rent due to them. Investors in investing their capital are not uninfluenced by fashion, skillful advertisement, philanthropy (as in the case of model tenement houses), and even patriotism. Business men are influenced by friendship and their conception of what is "fair" in business. Least of all, workmen act from a reasoned consideration of their material interests. Their choice of occupation is largely a matter of chance — the State is only now attempting to devise machinery to insure a wise choice of employment by the young. They rarely press for the most they could get when trade is booming;

strikes would be many times as frequent as they are if the manual working class made it the chief object of their life to get as much as they could out of industry.

This first assumption of the " competitive system " takes an unduly narrow view of human nature. The pressure of competition would be intolerable if every one in his economic relations always insisted on his full pound of flesh. So far as individuals are actuated solely by motives of material self-interest, industry does tend to become intolerable, as it is in the underpaid sweated industries on the East side of New York and the overpaid sweated industries of Pittsburg. Fortunately, human beings as a rule remain human in their economic relations; they are influenced by other than commercial motives. By relying on material self-interest for the driving force of industry, however, society encourages a wild pursuit of wealth; it penalizes the man (or class) that does not care about money-getting, and it tends to put wealth under the control of the greedy and unscrupulous.

III

The Assumption that Competition leads to the Survival of the Fittest

How far can the second assumption be granted? How far is competition in industry a struggle leading to the survival of the fittest? It is often regarded as such. People with wealth complacently regard themselves as on that account " fitter " than the poor, and therefore entitled to their greater riches; possession of riches they take as both evidence and reward of " fitness."

Importance of Equality. — It is clear that the struggle can have the effect of selecting the fittest only if the competitors start level. The competitive system, in relying on competition to secure a just distribution of wealth, treats

free competition as equivalent to *equal* competition; private property makes it impossible that free competition should be equal. Most of the competitors are handicapped by lack of property, which means defective training and lack of capital. Hence for most people freedom of enterprise is an empty privilege; they may be " free " to enter any trade or profession that offers a high remuneration, but they have not the means. On the other hand, the few who have property receive a start in the race, and can choose and continue in an occupation, irrespective of their ability, so long as their property lasts. An increasing number of people are exempt by the accident of birth from the struggle for survival, and it is very largely from their ranks that the individuals are drawn who control industry and govern the country. Freedom of enterprise is often confused with equality of opportunity. Freedom of enterprise obtains; but it is ineffective either to secure in every case the fittest for positions of direction and influence, or to eliminate the unfit from such positions, because equality of opportunity does not exist. Freedom of enterprise is a partial check on incompetence or " unfitness," and it enables the exceptionally able or industrious or fortunate to rise to positions of importance, as the existence of the " self-made man " shows. Its establishment has resulted in great increase in wealth, testifying to a great improvement in the organization of production; but it cannot be relied on, in the existing inequality of opportunity, to secure a distribution of the product in proportion to ability and industry. While there is too much competition in some quarters, there is not enough in others.

Character of Fitness. — Assuming, however, that economic competition is a struggle tending to the survival of the " fittest," the question arises, " Fittest for what? " So far as the test afforded by the struggle is effective, it is a test only of fitness to make wealth. The argument is a justification of free competition, only if the end of man is the production of material wealth. The distinctive feature of man is that he is a moral being; he can choose his end, and judge his " fitness " by reference to that end. To justify free competition on the ground that it gives position and influence to the " fittest " is therefore to choose the production of material wealth as the chief end of man. If any other end be chosen, for instance art, the religious life or the service of others, then free competition will stand condemned, because the survivors of the economic struggle are not conspicuous for love of beauty, piety, or disinterested philanthropy. A St. Francis or a Stevenson (not Stephenson) survives by reason of his very unfitness to make money; the cathedrals of the thirteenth century are a great achievement just because their builders did not adopt the methods that bring wealth in a competitive society. " Efficiency " is often used in the same loose way as " fitness." Just as the rapid acquisition of wealth, if due to causes other than luck, proves fitness to acquire wealth, which may carry with it unfitness to do anything else (especially to spend it well), so a high degree of efficiency may denote a low grade of ability and character, if the work is mechanical and requires little initiative and originality. Stevenson's " efficiency " at writing did not enable him to earn enough to keep himself until he was over thirty, while the " efficiency " that earns a popular novelist thousands a year will often fail to keep his writings alive ten years after he is dead. The type of " efficiency " or " fitness " that the competitive system tends to throw up is the " self-made man " or the American millionaire; he is sometimes a very admirable person, but sometimes one is reminded of Sydney Smith's reply to a man's boast that he was " self-made " — " You take a great responsibility off the shoulders of the Almighty."

IV

The Assumption that Wealth Will Be Associated with Social Service

The third assumption is the most important; it is the most general ground on which production is left to private enterprise and distribution to private contracts. The assumption is of course only that, *as a rule*, private wealth is the reward of service and that, *as a rule*, services will be induced by the prospect of private wealth. Exceptions to the rule are admitted by the practice of States, and we have already noted the chief of these exceptions; what we have still to note is that the grounds on which these exceptions were made would justify other exceptions so numerous and important as to suggest doubts of the validity of the rule. If it be found that the system of free enterprise admits in its normal working of private wealth without service, then the presumption against State interference with production and distribution breaks down.

Effect of Combination. — The chief case in which the State has superseded private enterprise on the ground that private enterprise would allow individuals to exact payment out of proportion to service, and so acquire private wealth without service, is the case of technical monopolies. When monopoly is required by technical considerations, as in the case of most public utilities, the consumer loses his usual protection against exploitation, namely competition, and the State has to devise other safeguards. Any restriction of competition, however, even if it fall far short of complete monopoly, deprives the consumer of his safeguard, competition; and restrictions on competition are far more frequent than perfectly free competition. In allowing freedom of enterprise society assumes that it will always pay producers to supply society with what it wants in the largest quantity possible; a very little experience of the effects of competition teaches producers that it may pay them better to restrict competition and limit supply. By limiting supply they force values up, and high values on a limited output may pay them as well as a limited output at a low value. The interest of society lies in a large output and low values, the interest of producers lies in high values, and if they can secure high values by no other means they will contrive to limit output. There is therefore in the system of free enterprise, since free enterprise includes freedom to combine as well as freedom to compete, a principle encouraging producers to make a profit out of society's loss; they can make society pay them more by the simple process of giving society less.

Under Conditions of Controlled Demand. — Nor is it safe to assume that freedom of enterprise will insure that producers will apply themselves to producing the things that people want. Consumers are open to influence; on the whole they are not averse to being told what they want, so that they are saved the trouble of deciding for themselves. Hence it is possible for producers, by advertisement and other means, to control demand, and make a profit by supplying what nobody, who stopped to think, would want. Thus pills that cost a penny a box to make and can have no effect on any disease except by way of faith-cure are sold at 25 cents a box; and countless products, made only to sell, earn for their manufacturers profits which represent no social service. Even when the advertised commodity is good of its kind, as are many proprietary foods, and the receipts of the businesses supplying them do not much more than cover expenses, the payments made by society are out of all proportion to the service received by society; for a large part of the expenses of the businesses consist of the expenses of advertisement and selling. All the cases we examined in which society assumed rational conduct and self-interest without justification are cases in which wealth will be obtained by some one without a corresponding service to society.

Other Exceptions. — When we examined the function of the dealer, we found that there were certain kinds of dealing, which we called "illegitimate speculation," which profited individuals at the expense of society. It is not necessary to recapitulate them; here we need only note that they tell against the assumption that wealth is obtained by service, and in the aggregate they form an important part of modern business. In most modern communities, owing to the growth of population and the increase of wealth, one kind of transaction akin to dealing affords especial opportunities of growing rich without performing any equivalent service to society. There are certain forms of wealth of which the supply is limited: Old Masters are the most obvious and land the most important example. As population grows and wealth increases, the demand for such things grows, and the fortunate possessors of them grow steadily richer without lifting a finger. The continued influence of the older aristocracy in the United Kingdom is due largely to this source of private wealth. It should be as difficult by sitting still to add a penny to one's income as it is by taking thought to add a cubit to one's stature.

Inheritance. — The older aristocracy suggests another and the most important method of acquiring wealth without rendering service, namely inheritance. It is no merit in a man to be born the son of a millionaire; yet society rewards his judicious choice of parents more highly than it rewards the efforts of its greatest artists, philosophers, scientists, and inventors. The inheritance of wealth is as important a cause of inequalities of wealth as is free enterprise; it has not the same grounds of social expedience. Even if private wealth is found to be the best incentive to wealth production, freedom of testamentary disposition seems an unnecessary extension of its rights. In this respect Feudalism, with its close association of duties with property and its resumption of possession by the King whenever the duties attaching to the property could not be performed by the tenant, affords a suggestive comparison with the modern system. To be logical, the advocates of free enterprise and competition should advocate the abolition of inheritance; the results of such a policy would be interesting and very different from the present system.

Rent. — Of almost equal social importance with the cases of individuals obtaining without rendering service are the cases in which wealth is indeed obtained in return for a service, but for a service that would have been forthcoming even if no payment has been made — the cases, that is to say, in which the payment is of the nature of economic rent. Land gives a service for which society pays the landowner; but land would be just as serviceable if no payment were made. We have seen that economic rent, or payments for productivity which is not evoked by or dependent on the payment, form a large part of income, not only of the income from land, but also, though in a less degree, of incomes from labor and capital. We saw also that society makes no distinction between economic rent and payments which do evoke, and are necessary to evoke, productivity; and no distinction between investments in property that yields economic rent and investments in property that yields only interest. Any wholesale confiscation, therefore, of rents or rent-yielding property would disappoint the legitimate expectations of individuals; it would involve injustice to these individuals and might create a feeling of insecurity that would outweigh the advantages of the confiscated property. While, however, the theory of rent does not justify a policy of confiscation, the consideration of economic rent remains of the utmost importance in forming a general view of the economic organization, since it is essential to a sound judgment of its advantages. It is an obvious defect of the present arrangement that society pays so much of its wealth to individuals, not indeed for nothing, but for services which it might have had without paying for them, if

only it had not allowed them to get into private hands. The present arrangement is socially wasteful, since society spends so much of its income in applying its normal incentive to production — property or private wealth — where no incentive is needed. A recognition of this waste is to be discerned in the attempt to concentrate the new taxation needed to finance new State-services on large incomes, of which economic rent may be presumed to form a large part, and to buy up natural monopolies and land, to secure any increases in the rent they yield.

Conclusion. — The assumption then that property represents service to society is too large to fit the facts, and the cases in which society has recognized an exception by socializing a service or taxing a form of income by no means exhaust the exceptions. Free enterprise must be the basis of any organization of industry, but its disadvantages have been underrated, and there is no adequate ground for the existing presumption against State-enterprise. Even when wealth is obtained in return for service, the service may be accompanied and neutralized by some disservice; the cheap goods of the sweater are a service, but a service neutralized by the social evil of sweating. This aspect of the present economic organization, however, can be considered better in a later chapter.

Even less adequate does private enterprise appear when we consider the converse of the assumption we have been criticizing, namely, that all the services society needs, and in the present state of wealth can afford, will be forthcoming from private enterprise. So numerous, we have seen, are the cases in which the State supplies services, formerly neglected or supplied by private enterprise, that the assumption would need no further criticism if it were not that there exists a widespread though unconscious feeling that a service is not important or worth providing, unless it will " pay " in a competitive market. This simple test of the need for a thing, Will people pay for it? is doubtless useful and convenient as a rough-and-ready guide to production; more than that it is not. To use it as a general test of the value of services is to assume a coincidence of public and private interests which does not exist for two reasons: firstly, because many people are too poor to pay for things which it is in the public interest that they should have, and secondly, because there are many services enjoyed *communally*, which individuals either will not or cannot pay for individually. In the first class fall the elementary functions of government. The administration of justice was at one time supplied for fees and paid for by fees; society found it "pay" better to supply it "at a loss." General elementary education is needed in the interests of society, but cannot be paid for by those who benefit by it. Sanitation and the treatment of infectious diseases the State has taken over from private enterprise; for the same reason, namely, that health is a public interest, it is assuming responsibility for the treatment of other diseases and for the feeding of school children. Decent housing accommodation cannot be supplied commercially to certain classes; and apparently land for small farmers is not to be had at a price they can pay; in both cases the State is interfering. In the second class fall such amenities of town life as parks, picture-galleries, and museums. Individual workmen in congested districts cannot afford open spaces, the town provides them; individual students of art cannot afford to buy good pictures, the State buys for them, — it is true that the taste shown by the State in its purchases is not always the best possible, but the taste of the State is the average of the taste of the citizens, and that can be raised only by a more generous expenditure on art. Liberal studies and research do not "pay" commercially; the State therefore contributes to their upkeep, and ought to contribute more. Street-railways may justly be run "at a loss," if they help to relieve overcrowding or are needed to maintain the prosperity of an agricultural district. Services supplied by the State "at a loss" are merely services paid for partially by taxes instead of by prices; the maintenance of law and order and national defense are paid for wholly by taxes, yet no one speaks of them as being "run at a loss." Utility to a community is one thing, utility to individuals another. Where individual values and social values coincide, the supply of services can be left to private enterprise; where, as in so many cases, they do not coincide, the State, or some other public body, must act. In the case of government enterprise a commercial loss may be a social gain.

V

The Assumption that Market Value Is a Satisfactory Indicator for Production to Follow

The last assumption of the present economic system is that market value is not only an automatic indicator for production to follow, but an ideal indicator, which we have only to follow to secure the greatest possible amount of satisfaction for society from the efforts and sacrifices of production. A high value indicates that a thing is wanted much, it also stimulates the supply of it, falling value indicates that no more of a thing is wanted and at the same time checks the supply of it; so that, it is assumed, we have only to leave business men to follow market values in their production and society will get just what it wants. According to this view, given free competition, supply and demand tend to reach an equilibrium, at which the efforts and sacrifices which lie behind supply are exactly balanced by the satisfactions which lie behind demand; thus present values represent a maximum economy of the application of means to ends, a maximum of satisfactions and a minimum of cost.

Influence of Unequal Incomes. — Such a conclusion requires not merely free but equal competition. The indicator value, though it is as a matter of fact followed by production, is very unreliable as a guide to the best use of the productive powers of society. Let us return for a moment to our examination of the influence of utility on value. We saw that the law of diminishing utility explains our valuations of things. The value we put on anything depends on the amount of it we have, every addition to our supply of it gives us less satisfaction than the previous addition; therefore the falling of the value of a thing as the supply increases does indicate that it is satisfying a less intense want, and, by indicating to the producer that something else is not wanted, does conduce to a greater total of satisfaction. But this explanation tells us only why different quantities of the same commodity give different degrees of satisfaction to the *same* person; why, in the instance we took, a third pound of tea a week gives less satisfaction than the first pound of tea; it does not tell us why *different individuals* set different valuations on the same quantity of the same commodity, why, for instance the man with $5000 a year values one pound of tea at $1.25 and a second at 75 cents, while the man with only $500 values one pound of tea a week at 50 cents and a second pound at 25 cents. The reason is of course that their incomes are different. The actual valuation that a man sets on a pound of tea a week depends not only on the number of pounds he has already, but on the income out of which he has to satisfy all his wants.

Illustration. — Suppose we had a "unit of satisfaction," suppose satisfactions could be measured and we could express any satisfaction in terms of that unit; then we should find that five dollars represented to the man with $50,000 a year the possibility of, say, one unit of satisfaction, to the man with $5000 a year something like ten units, and to the man with a wife and children to keep on $15 a week perhaps a hundred units of satisfaction. Spent by a rich man five dollars gives one unit of satisfaction, spent by a poor man five dollars gives a hundred times as much satisfaction; therefore the rich man to get the satisfaction of a pound of tea a week might be willing to give $50, while the poor man, for the same satisfaction, would only give 50 cents. The rich man, since his chief wants are all near the point of satiety, will spend in satisfying his slightest whims as much money as the poor man will spend to satisfy his greatest needs. The reason is the same law of diminishing utility; the rich man can carry the satisfaction of his wants further than the poor man, and therefore gains less from an additional purchase.

Now in the market the rich man's five dollars, which represents one unit of satisfaction, has exactly the same influence as the poor man's five dollars, which represents a hundred units of satisfaction. If a rich man offers $500 for a Pekinese puppy while a poor man is offering $495 for the education of his children, the productive resources of society under competitive conditions will be devoted to getting the rich man his Pekinese puppy before the education of the poor man's children will be thought of. This is so only if the proportion that costs of production bear to market value is roughly the same with the different services; but as a matter of fact we may expect the margin of profit to be greater in the case of commodities consumed chiefly by the rich, since rich buyers have not the same incentive as poor buyers to beat prices down. The richer classes will have the first claim on the productive resources of society because money means least to them; as their luxuries pall and their whims are exhausted, they will offer less and less for further satisfactions, the value of their luxuries will sink, until it pays producers better to satisfy the needs of the poor; by following market values producers supply the extravagant futilities of Palm Beach, while food, decent housing and clothing are lacking in the slums.

Inadequacy of Market Value as Social Guide. — In following market values, then, the organizers of production are following a blind guide, so far as the social value of work is concerned. Market values would indicate where the productive powers of society can be applied to produce the greatest satisfaction only if incomes were equal or proportionate to families. The unequal distribution of wealth makes them a false and misleading indicator, and the greater the inequality of wealth the greater will be the waste due to this faulty application of the productive powers of society. Inequality of wealth is increasing, great fortunes are like snowballs; we may expect therefore a less and less economical application of productive power to wants as time goes on, we have to look to a growing divergence between the aims of production and the needs of society. Society is behaving like a man who should spend $200 on a dress suit when he has no underclothing, or buy fancy cakes when he needs bread. Market values are the outcome of the present distribution of wealth; the principle on which they, and therefore the economic organization of which they are the center, are based is the principle " Unto him that hath shall be given, and from him that hath not shall be taken away even that which he hath."

This characteristic of market values makes the present distribution of income, as well as the direction of production, unreasonable. We saw that productivity was an important influence in distribution; competition among entrepreneurs tended to secure for each producer and each agent of production the equivalent of its productivity. But " productivity " is always productivity *of value*, and therefore bears no necessary relation to need. The *product* of Milton's labors from 1658 to 1665 was *Paradise Lost*, the *productivity* of those labors was between $50 and $100, the price he received for the product. The *produce* of a farm is usually increased by keeping game down, but by stocking the farm with game at the expense of the produce the *productivity* will often be increased, since more will be paid altogether for the use of the land. The defense, then, of the present distribution of income that it is in accordance with productivity, *that each gets the value of his contribution to wealth*, is an explanation merely, not a defense. Value is a question-begging term. All that this argument amounts to is that *the contribution of each is valued at what he gets.* If we inquire, Have these values any basis in principle, any constant relation to social service, any absolute standard? we find that they have not.

Difficulties Involved To-day. — In conclusion, it may be noted that the policy of *laissez-faire*, which dominated the State in English-speaking countries during a large part of the nineteenth century, created enormous difficulties for the State in the twentieth century. It was natural enough and doubtless expedient to sweep away a system of State-regulation of economic activities which had been rendered obsolete by the Industrial Revolution. But the evils of State-regulation in the early nineteenth century were due to the character of the regulation and of the State, not to State-regulation as such. And the State, having once relinquished the attempt to control the economic organization, has found the task of control doubly difficult since it has resumed the attempt. The very success of the policy of *laissez-faire* in stimulating the growth of material wealth has complicated the task, since it has created great fortunes and businesses, that can meet the State on terms of something like equality. Economic relations have in some places become of more importance than political relations; the economic organization, which always develops more rapidly than the political organization, threatens to swamp or control the State. Hence the strong reaction against *laissez-faire;* hence the regulation of conditions and hours of employment, the proposal in Great Britain to return to Protection, the State-fixing of wages, and, in some cases, of rates and prices, the proposal to extend to England from Scotland and Ireland the State-fixing of rents, the municipalization of public utilities, the dissolution of trusts — though trusts are a perfectly natural outcome of free enterprise, — the taxation of the overrich. Yet the State has not got control of the economic organization; in many places the economic organization controls the State; and there are signs, in such movements as Syndicalism, of a despair of the State as a means of securing the social control of the economic organization, which will increase still further the difficulty of securing State control. Moreover, the reluctance of nineteenth-century governments to regulate and supplement freedom of enterprise has resulted in evils that obscure the importance of freedom of enterprise itself. Freedom of enterprise in some form or another must be the basis of any organization of production based on specialization; not only is it the only effective guarantee of individual initiative, and therefore of elasticity and adaptability in the organization, but the alternative — that the State should decide in detail what every one shall do and what every one shall receive — is a task to which no body of officials is equal. But freedom of enterprise does not exclude State enterprise, and the existing *presumption* against *any* interference with freedom of enterprise is the most serious hindrance to true economic progress.

CHAPTER XXIII

WEALTH AND WELFARE — THE MEASUREMENT OF WEALTH

I

Wealth as Product

Definition of "Wealth." — The word "wealth" is used in more senses than one. The commonest seems to be "economic wealth," which, we have seen, means anything that satisfies a human want and is not unlimited in quantity. Economists take this meaning of the word and standardize it. Economics is the study of the social organization by which wealth in this sense is produced and distributed. The want which a thing must satisfy, to come under this definition of wealth, may be of any kind. The beer with which the drunkard tries to satisfy himself is just as much wealth as the beer that the temperate take to quench their thirst on a hot day. Rifles and bicycles, made sometimes by the same firms, are both wealth, though their uses are so different. "Bad" literature and "bad" art are wealth just as much as "good" literature and "good" art, since many people get a satisfaction from them; those who possess them are rich to the extent to which they possess them; if they get no satisfaction from them themselves, they can sell them to people who do, and with the proceeds buy something that they do want. While the want which a thing satisfies may be of any kind, the thing must be limited in quantity, or it will not count as wealth. If it is unlimited in quantity the possessors of it will be unable to exchange it for anything else, since no one will give anything in exchange for a thing that can be had for nothing. This differentia is necessary to the definition of wealth, since the word is applied — strictly within its original meaning, but only metaphorically to-day — to things which satisfy human want and are unlimited in quantity. Fresh air, for example, and scenery are spoken of as wealth. In the ordinary sense of the word, however, they are not wealth; no one who had more of them at his command than he wanted could get anything in exchange for them; only when the supply of them is limited do they become wealth in the narrower and more usual sense of the word, as they would do if the fresh air were laid on to New York by pipe from the Adirondacks, or the scenery inclosed in a park and a charge made for admission.

Wealth as the Object of Economic Organization. — This narrow use of the word "wealth" identifies wealth with the product of the economic organization. The economic organization as a whole exists to produce means of satisfying wants that are not unlimited in quantity or provided "free" by nature; means of satisfaction, that is to say, which will not be forthcoming without some organization to produce them. The organization and its parts derive their value from the product; the worker gets a wage only because his work is needed to produce these means of satisfaction; a machine has a value only because it can be used for the same purpose; the product is the end and object of the organization. The wealth of an individual or a country is the means of satisfaction which he or it possesses, or, in other words, the amount of the product of industry and commerce which he or it can command. The product usually takes a material form — so many pieces of cloth, so many tons of coal, etc.; but it may equally well take the form of a service. Transport is an important part of the wealth of modern countries; it

satisfies wants, directly and indirectly, and it is not provided by nature free. The services of the professions are wealth of the same kind. Indeed, material goods are desired only for the services which they render; men want not cloth but clothing, not coal but heat, and cloth and coal are wealth only because they enable men to satisfy these wants. But whether we speak of goods and services or of services alone as forming the content of wealth, we identify wealth with the product of the economic organization; the economic organization exists to produce these means of satisfying wants, and but for the economic organization they would not be forthcoming.

Measuring Wealth. — The method by which wealth is measured brings out clearly this conception of it. It is always assumed that wealth is measurable, and it seems only a matter of time and trouble to total up the wealth of a country in tons of this commodity, yards of that, and gallons of another. Such a method, however, would give us no measure of wealth in the form of services; we might put in our inventory so many surgeons and so many teachers; but since the surgeons and teachers might differ very much in their ability, skill, and industry, we should have no measure of the country's means of satisfying its wants in the way of surgical treatment and education. And even in the case of material forms of wealth such a measure is inadequate, since it ignores differences in quality; sixty yards of one kind of cloth may be double the amount of wealth embodied in sixty yards of another kind of cloth. The difficulty is overcome by totaling not the forms of wealth themselves, but their exchange-values. Most production is carried on for exchange, and nearly all forms of wealth are at some time or other exchanged. This exchange takes place not directly, but through the medium of money. Hence money becomes a general common measure of exchange-values, and a total of wealth is expressed in terms of money; so accustomed have we become to measuring wealth in money, that the word " money " is frequently used as synonymous with " wealth."

Practical Difficulties in Measuring Wealth. — There are, however, practical difficulties in the way of getting directly the total value of the product of the economic organization, since in no country is anything like a complete annual census of production taken. Indirectly, however, the total can be reached by adding together incomes, which we have the means of estimating. A man's income is the claim (measured in money) which he has on the product of the economic organization; the total of the incomes of the people in the country will be the total value of the country's product, since the claims as a whole are exchanged for the product as a whole. We have more information about people's incomes than we have about their capital or total wealth, and, as we saw in Chapter XII, we must consider wealth as income rather than as stock, if we are not to overlook certain important forms of wealth, especially services rendered directly and not through the medium of commodities.

By making a total of incomes the wealth of the United States is estimated (1918) at about sixty billion dollars a year. The information about incomes is, of course, very inexact. It is estimated that not more then 6,250,000 people will file a return under the present law. Wage statistics are fragmentary and unreliable, but careful statisticians have prepared estimates on the basis of such data as is available. Sixty billions under present conditions (1918) is therefore approximately, if not absolutely, accurate. This total of incomes is the total value of the annual product of the country's economic organization; for the incomes are simply the claims on the product which the economic organization gives rise to. The method of measuring wealth, then, and the estimate of the wealth of the country as a whole, are based on the conception of wealth as consisting in product.

There is no need to go behind this conception for the purpose of studying the organization for producing and distributing wealth. Economics, in standardizing this meaning of wealth, is merely following ordinary usage. A " rich " man is a man with a large command of the product of the economic organization, whether he exercises it by buying goods or services. A " rich " country is a country which derives a large amount of product from its economic organization, or has large claims on the product of other countries' economic organization — as England has in the form of interest on foreign investments. The present age is " rich " compared with earlier ages, because the product of its economic organization is so much greater; when we speak of the " growth of wealth " we mean the increase of product. On this conception of wealth the present economic organization is based. It is directed solely to securing the largest possible product in proportion to expenditure, and is judged accordingly. Distribution is based on the assumption that those who contribute to production can be relied on to insist on a proportionate share of the product; they are " efficient " in proportion to their productivity, and the system is " fair " or " unfair " according as distribution is in proportion to productivity.

II

Wealth as Welfare

But the word " wealth " is capable of another meaning. It is used to denote anything that contributes to human welfare. In this sense, wealth will not exclude any means of satisfying human wants merely because they are not limited in quantity; in this sense, fresh air and scenery are an important part of wealth. On the other hand, it does discriminate between wants, and excludes from the category of wealth the means of satisfying some wants which do not contribute to welfare. What satisfactions we regard as contributing to welfare depends on our ethical views; but even the Utilitarian, who regards satisfactions quantitatively only and makes pleasure the end of life, will hold that welfare requires some wants to be left unsatisfied (those that " draw repenting after "), while others need cultivation.

Different Conceptions of Welfare. — There is not the same agreement in the application of the word " wealth " in this second sense as in the other sense. It is applied to different things according as conceptions of welfare vary; the drunkard will apply it to beer, his wife probably will not. And conceptions of welfare vary widely. The statesman who is anxious to pursue a " spirited " foreign policy regards armaments as wealth in this second sense of contributing to welfare, as well as in the other, more ordinary, sense; the Quakers regard armaments as what Ruskin called " illth." Ruskin's quarrel with his contemporaries — or one of his quarrels — was that they regarded as contributing to welfare, and therefore as " wealth " in this deeper sense, the great mass of mechanically ornamented products of modern history, which he regarded as ugly, useless, and demoralizing. The English governing class of a hundred years ago encouraged inclosures, partly because it was to their private interest so to do, but partly also because inclosures increased the product of the land, and they thought that an increase in product must necessarily bring an increase in welfare; in Germany the same change was effected under a different conception of social welfare, the peasants on the land being treated as of more importance than the product of the land.

Because there are these divergent conceptions of welfare, varying with every variation in ethical, æsthetic, and political views, economists have chosen to leave on one side the study of wealth in this second sense, and have confined themselves to wealth in the commoner, agreed sense; they have studied the organization for satisfying wants, without considering distinctions in the kind of wants. Unfortunately, the two senses of the word are not kept distinct in ordinary speech. It is impossible in practice to prevent the associations attached to wealth in its wider sense from attaching themselves to the word when it is used to mean only economic wealth. The distinction can be made and maintained in a systematic treatise; but as soon as we pass from the treatise to conversation or public discussion, from study to practice, our careful distinction is likely to be ignored and perhaps forgotten by ourselves. It is impossible, therefore, to make any practical use of economic studies, to *apply* the conclusions of economic science, without considering what is the relation between wealth in the narrower sense of economic wealth and wealth in the wider sense which includes all means of welfare; we must have a clear idea of the relation of *wealth* — for the rest of this chapter we will keep the word to mean economic wealth — to *welfare.* It is the more necessary to consider this question, since wealth can be measured and changes in its quantity stated definitely, while of welfare there is no exact or definite measure; inevitably, in the absence of any other measure of welfare, the economic measure will be used, and an increase in wealth treated as an increase in welfare. To state fully the relation of wealth to welfare would, of course, involve answering the question, What is welfare? and comparing and criticizing all the divergent conceptions of welfare, which would be an ethical inquiry and beyond our scope. Our purpose, however, will be served if we can indicate the chief influences on welfare which the measure of wealth ignores, and so make clear the limits within which an increase of wealth indicates an increase of welfare. That is the important practical question; how far, and under what circumstances, an increase of wealth is an increase of welfare.

III

Defects in the Usual Method of Computing the Country's Wealth

The wealth of the United States is estimated at about sixty billion dollars per annum. But such an estimate has serious defects; it excludes much that is wealth and includes much that is not wealth.

Goods and Services not Entering Exchange. — It excludes much that is wealth, because it takes account only of goods and services that come within the circle of exchange. There are many services given for which no payment is made, but which are wealth just as much as services which are paid for. The most important of these unpaid services is the domestic work of wives and daughters. Domestic servants are paid wages, hence their services are included in the estimate of the country's wealth; wives and daughters are paid nothing for exactly the same services, hence no record or measure of their work exists, and their services are ignored in estimating the country's wealth. The services of Congressmen are counted as part of the country's wealth, since they receive a salary. The humbler, but equally useful, county commissioner or town councilman may be paid nothing for his services, which are therefore ignored in the process of computing the nation's wealth. The same is the case with all voluntary social and public service, it is ignored in the ordinary computation of wealth; yet the economic loss of a war would hardly be greater than the cessation of such services. The method ignores material forms of wealth as well as services. The vegetables a man buys are included in the sixty billion dollars per year; the vegetables he grows for his own use will not be, since they do not come into the market, where wealth is measured by being exchanged for money. This element of subsistence economy is more important in America than in the United Kingdom, and used to be more important than it is; as it gives place to commercial economy, the amount of wealth *measured* will increase, but there may be no increase in the product of the country's activities and resources. Of course it would be possible to estimate the value of these uncommercial goods and services, and add it to the estimate of the country's wealth obtained by the other method; but the calculation would be difficult, there are no materials for it in existence, it is not, as a matter of fact, made, and the wealth it represents, remaining unvalued, tends to be overlooked.

The Inclusion of Non-wealth. — On the other hand, the ordinary computation of a country's wealth includes much that is not wealth. It includes every form of money income which is received by the individuals in the country; there are, however, sources of income to individuals which are not wealth from the point of view of the community. The National Debt will serve as an example. United States bonds are property, not wealth. The interest on them is not in the same category as the interest paid on industrial investments or on loans made to Municipal Corporations for industrial purposes; the interest on the latter is produced by the plant in which the investment is embodied, it is an actual addition to wealth, which the investors are able to secure; the interest on the former is merely a transfer of so much wealth from the taxpayer to the holder of government bonds, since the loan which the bonds represent has been spent once for all on war or some other purpose long ago, and is doing nothing to increase production now.

Offsets. — More important than this source of error is the defect in the method of computing wealth, by which certain services are treated as additions to wealth which should really be treated as deductions from it. Coal is wealth, and the salaries, profits, and wages to which its production gives rise are rightly included in the estimate of the country's wealth. But the use of coal produces so much dirt in the atmosphere that clothes need washing more frequently than they would do but for its use. A large part, therefore, of the expense of laundry should be set against the use of coal. The services of the laundries are not an addition to the wealth of the country; they are part of the cost of securing the addition to the wealth of the country made by the use of coal. We should deduct them from the value of the coal to get the net or real addition to the wealth of the country made by coal; the ordinary computation adds them. There are many cases in which one industry or service is called for by the ill effects of others, many cases in which one group of workers merely repairs evils incidental to the work of another set, with the result that the net addition made to wealth is far less than the apparent addition.

The increase in wealth produced by the factory system is subject to large discounts on this account. By bringing together the workers in large masses, the system enormously increased the productivity of labor; but by bringing them together it at the same time created the modern town. Life in a town, to be healthy and decent, requires a much greater expenditure per head of population, on sanitation, street-paving and cleansing, police, and even education, than life in the country, as is shown by the higher level of local taxation in town than country. To estimate the net addition made to wealth by modern methods of production, therefore, we must deduct from the value of the product the expense of all these public utility services; they are all part of the social cost of production of goods made by these methods. The ordinary computation of national wealth again does not deduct, but adds; for it includes in the national income *both* the incomes derived from industry *and* the incomes derived from loans to establish these services and payments to maintain them. Factory inspection, wages boards, the trade union organization which the workers have been forced to establish in self-defense, are all part of the social cost of production of goods made by modern methods, and should be debited against the goods. Similarly, if we wish to ascertain the real addition to wealth made by the motor industry, we shall have to deduct from the value of the motors the cost of reconstructing roads to suit motor traffic. Modern society is rather like an incompetent housewife, who " makes work " for herself by her slovenly methods; with this difference that she complains of the extra work, while we glory in it, boasting of the increase of wealth and the unprecedented dimensions of the national income.

Inadequacy of Market-value as Measure. — Another defect in the measurement of wealth arises from the fact that the only objective measure of wealth is market-value. Wealth is wealth because it satisfies human want; an increase of wealth should mean, therefore, an increase of satisfaction; an increase of wealth *as measured* may take place without any increase in satisfaction. Our study of value has already revealed this to us. The value of a thing may change without any change in the thing itself. Restriction of supply or increase in demand will enhance the value of a thing without any increase in the satisfaction afforded, and demand depends on the distribution of purchasing power as well as on desire. The Degas, which the artist sold for $100 and one of our millionaires subsequently bought for $85,000, had the same capacity to satisfy human want at the lower value as at the higher. The satisfaction which an opera singer's services give the nation will remain the same, whether he be paid $100,000 a year or a legal maximum of $2500 a year; but in the latter case the national income *as measured* will be $97,500 less. The amount of satisfaction afforded to the nation by the unfortunate individuals employed as flunkeys would be increased if they were set to farm-laboring; since flunkeys are paid higher wages than farm-laborers, the national wealth *as measured* would be reduced by the change. Market-value is not an absolute measure of satisfaction; it measures the satisfaction afforded by different things to the *same* individual, it is no measure of satisfaction as between different individuals. The rich man's dollar has the same influence on market-values as the poor man's dollar, it represents a much smaller satisfaction; hence a box at the theater has the same value, and represents the same amount of wealth *as measured* as several bushels of wheat. The unequal distribution of wealth makes market-values inevitably and progressively false as a measure or indication of the satisfaction afforded by wealth; to measure national wealth, therefore, by totaling market-values is to get no measure of the satisfaction afforded to the nation by wealth. If the national wealth *as measured* were doubled, it would be no proof of a doubling of satisfaction. It would be possible and useful to draw up different inventories of goods and services, having all the same total value, but yielding different totals of satisfaction. In fact market-value, the only objective measure of wealth we have, is so very rough and fluctuating a measure of satisfaction, that it is no measure of wealth from the point of view of society at all; and it is misleading to place so much reliance as is placed upon it in the study of wealth.

If we are to measure national wealth by totaling means of satisfaction, we need a unit of satisfaction, a thing which we do not possess. At most, therefore, sixty billions a year is a rough measure of the nation's *economic power;* not of its product, but of its productive capacity; not of the means of satisfactions afforded by the economic organization, but of the command of them afforded by the economic organization. The amount of satisfaction that the nation will derive from its economic organization will depend, not only on the degree of productive power, but on its direction; not on the volume only of the product, but on its nature; not on the amount of wealth as measured only, but on its use.

CHAPTER XXIV

WEALTH AND WELFARE — ECONOMIC INFLUENCES ON WELFARE

I

The Influence of Distribution

Welfare and Inequality in Distribution. — We have to consider the influences exercised on welfare by wealth and ignored by the ordinary measurement of wealth. First the influence exerted by different uses of wealth. We can consider this influence under two heads: use by society, and use by the individuals who compose society. Use by society is the problem of distribution; and distribution is conditioned to a large extent by the needs of production. The system of free enterprise is upheld as the best means of maintaining and increasing the production of wealth; if free enterprise involves an unequal distribution of wealth, that inequality is condoned as providing the best incentive to enterprise. With the system of free enterprise as a productive organization we have dealt elsewhere; here it is necessary to consider only the influence of the inequality of wealth, which it involves, on the amount of satisfaction afforded by wealth. The unequal distribution makes market-values a false and misleading indicator of the satisfaction afforded by different kinds of wealth; yet market-values are the sole indicator of the needs of society, followed by producers under the system of free enterprise. Free enterprise, therefore, following market-values, is an automatic device for securing an uneconomical application of productive power, and preventing a maximum of satisfaction from being secured for a minimum of effort and sacrifice. Anything that tends to equalize the distribution of wealth tends to lessen the vagaries of the indicator which production follows, and tends to secure a more economical application of productive power to satisfying wants. Taxation and laws of inheritance that tend to equalize wealth may check the growth of wealth in gross, and yet increase welfare by increasing the satisfaction afforded by wealth; the super-tax, taken from the incomes of the rich and expended by old-age pensioners, will afford the latter a much greater amount of satisfaction than the former would have got from it; the bushel of wheat on which the poor will spend a couple of dollars will afford a much greater satisfaction than the seat at a theater on which the rich man might have spent it.

Significance of Social Standards. — Welfare is influenced by the distribution of wealth in another way. Once the primary needs of physical existence are met, expenditure is governed very largely by social standards. People choose a house in accordance not merely with the requirements of health, but with the standard of house accommodation of their class. They choose clothes which will not only insure warmth, but will also satisfy a certain standard of ostentation. They buy books, not to read — the books they read they get from the circulating library — but to conform to certain standards of furnishing. And poverty consists as much in inability to live up to the standards of one's class as in actual lack of wealth. Shabby clothes are a source of unhappiness, not because they fail to keep one warm, but because they make the wearer disagreeably conspicuous; if every one wore shabby clothes, as was the case in the Middle Ages, no one would object to wearing shabby clothes. Moreover, the standards of one class influence the standards of the class below, and so on through all the classes of society. A considerable part of the expenditure of every class, except the very richest and the very poorest, is governed, not by any rational judgment of what will give the truest satisfaction, but by the desire to do as other members of the class do; and in all the intermediate classes there are people who *feel* poor, although they are not poor by any absolute standard. Now the concentration of wealth in the hands of a few enables that few to set a very high standard of expenditure, which influences the ideas of all the other classes. The riches of the rich intensify the poverty of the poor. Where wealth is less, but more evenly distributed, as in Denmark, equal satisfaction can be obtained from a smaller income; every class in Denmark lives in a smaller house, has less furniture and probably fewer clothes, and spends less on amusements than the corresponding class in England, yet they certainly get no less satisfaction from wealth. Thus it is probable that the happiness that wealth gives depends as much on the distribution as on the absolute amount of wealth. The present age is unhappy not because it is poor — it is richer than any preceding age — but because the inequalities of wealth, which have become obvious to the most careless, have no basis in ethical principle. There are philosophers who try to bring ethical ideas into accord with this inequality; but the basis of most Western people's ethical ideas are to be found in Christianity and democracy, neither of which gives any countenance to the inequality. Not what he was, but what he thinks he might have and ought to have, determines a man's state of mind. Hence the worker of to-day is discontented, and derives not the slightest comfort from the knowledge that in any earlier age his real income would probably have been less than it is.

Wealth and Social Power. — Another drawback to an unequal distribution of wealth is the opportunities it gives of tyranny. Wealth under any circumstances is power, and when it takes the form of ownership of the means of production, on which the manual worker is dependent for the opportunity of earning his livelihood, it is a dangerous power. The contempt into which the State is falling is due to the contrast between the political forms of democracy and the economic reality of oligarchy. A class of multi-millionaires is a standing menace to the supremacy of the State; and the experience of beneficiaries suggests that a well-meaning millionaire is an almost greater nuisance than his wicked brother.

II

The Influence of the Use of Wealth and the Kind of Product

Wasting Wealth. — Welfare, then, can be increased by a better use of wealth by society, in the form of a better distribution of it, as well as by an increase in the amount of wealth; the ordinary computation of wealth is concerned solely with the measurement of the latter, and ignores the former. Similarly it ignores the even more important influence on welfare of the use of wealth by individuals. An increase of production obviously is no increase of welfare if the product is wasted. Waste in the sense of objectless destruction of product is rare; but in a broad sense there is waste whenever wealth is applied to a use that gives less satisfaction than another use to which it could have been applied; and waste in that sense is common. To prevent it, as much care would be needed in spending as in getting; consumption would have to be organized as systematically as production; and as much care exercised in the choice of people to direct the organization. No such care is taken, and in consequence much production adds nothing to welfare. A man will work hard and increase society's wealth by building up an efficient business, and then waste the increase in maintaining his children in an idleness which they do not enjoy and which is not good for them. Workers are constantly speeded up and industry made more productive; the additional product is no addition to welfare if the employer's share goes in ostentatious luxury, and the workers are driven by exhaustion to spend their share in procuring excitement to relieve exhaustion. Often an increase of wealth merely cancels some existing means of welfare. An addition to wealth that takes the form of motors so speedy as to constitute a danger to life and a nuisance to the inoffensive pedestrian or cyclist may take away from the pleasure of walking and cycling more than it adds to the pleasure of those who can afford motors; a colliery that blackens a countryside adds to material wealth only by destroying an immaterial source of welfare.

Fads and Fashions. — Two kinds of waste or misapplication of wealth are especially important as influencing welfare without being indicated by the measure of wealth. The first is the application of production to objects which give an obvious and immediate satisfaction, to the neglect of objects that give a more lasting or intense, though less obvious, satisfaction. This is illustrated by the contrast between the valuations of the market and the valuations of the connoisseur. Good art gives not only a different satisfaction from bad art, but *more* satisfaction. A thing of beauty is literally "a joy forever," while last year's fashions are the abomination of this. Modern industry gives us more furniture, more metal work, more carpets, more wall coverings, and more "decoration" than handicraft; yet the connoisseur, the man who has made it his business to understand these things, prefers the quality of the age of handicraft to the quantity of modern industry. The view of wealth which counts only product encourages methods of production which are adapted to quantity rather than quality; and freedom of enterprise encourages the supply of those pleasures which offer gratification on the easiest terms. Poetry as a rule gives a more intense pleasure than prose fiction, but it asks a greater effort from the reader; prose fiction has grown, therefore, while poetry is the pleasure of the few. For the same reason bad fiction is produced in greater quantity than good fiction; for the same reason the moving picture "drama," which asks of the observer an intellectual effort that could not task the most feeble minded, is displacing the novelette.

Varied Character of Satisfaction. — In the second place, the measure of wealth would be no measure of welfare, even if it represented the *true* amount of satisfaction afforded by wealth, because it ignores differences in kind of satisfaction. The definition of wealth on which the measurement of wealth is based regards the kind of wants as indifferent, looking merely to the quantity of satisfaction given. Wealth in this sense is a measure of welfare only on the Utilitarian view of welfare, that it consists in the greatest possible surplus of pleasure over pain; it is only on this view that differences in *kind* of satisfaction can be ignored, and differences in quantity or intensity alone regarded. The amount or intensity of satisfaction offered by two forms of wealth may be equal; they will count equally in the computation of the country's wealth. Their contribution to welfare, on any except the Utilitarian view, need not be equal, since there may be a difference between them which we express by the terms "higher" and "lower." Many satisfactions are what is called "demoralizing," drunkenness for example: the means of obtaining them (provided they are not unlimited in quantity) count as wealth, and contribute to the total of national wealth; to welfare they contribute nothing, but rather detract from it. Other satisfactions, without being bad in themselves, may interfere with higher satisfactions; riches, for example, hamper a man's entry into the Kingdom of Heaven, and, on the view of welfare that attaches importance to the Kingdom of Heaven, are to be avoided; or to take a more mundane example, comfort in modern cities can be carried to such extremes that health is impaired by want of exercise.

Conclusion. — Wealth then, as measured, is no criterion of welfare; the direction of productive power is as important for welfare as its amount; an increase of wealth may take such a form that welfare is not increased. The increase of wealth since the Industrial Revolution includes much that no one would be the worse without. Much of it is merely means of ostentation, which adds to the satisfaction of those who outshine their fellows only so much as it detracts from the satisfaction of those who are outshone. Much of it takes the form of machine-made ornament, which is neither individual nor organic to the object to which it is applied, and adds nothing to its beauty. The furnishings and fabric of a modern house of almost any class are plastered over with such futilities — all those trifles that are neither beautiful nor useful, give no satisfaction three days after they are bought, and get in everybody's way; while those who can afford collect old furniture, and the only thing which cannot be got is simplicity. The most expensive process in the making of pottery is the mechanical addition of the mechanical ornament that drives people to collect old china. The national income is further swollen by a host of things "made to sell," which attract purchasers by their surface finish but are useless for their ostensible object, and by all sorts of expensive processes and devices for manufacturing shams. We have no measure of utility except the meaningless measure of money, and very few standards; hence no measurement can be made of the amount of this useless production; but obviously it occupies no inconsiderable portion of the productive powers of the country.

III

The Influence of Work

Significance of Conditions of Work. — The ordinary measurement of wealth then gives us no reliable indication of the amount or value of the satisfaction afforded by wealth. It ignores another influence which the economic organization exerts upon welfare, by taking into consideration only the *product* of the economic organization and seeking to measure that alone. The conditions of production, *work*, in the widest meaning of the term, are as important for welfare as the product. Some slight recognition of this is to be seen in the attitude of the State to industry; a certain minimum of sanitation, safety, and, in some cases, leisure, is imposed; but the interpretation given to " conditions " is so restricted that it is hardly an exaggeration to say that their influence on welfare has been forgotten by society.

Conditions Involved: Object. — The influence of work on welfare is exerted through many channels; the chief are perhaps its *object*, the nature of its *process*, and the nature of its *control*. The principle that the object of work is important to the worker is recognized in relief works. It is felt to be demoralizing to set a man to useless work, merely to make him work; his self-respect suffers if he is set to dig trenches for another man to fill. The same feeling underlies the use of such a word as " flunkey " as a term of abuse; it is felt that the work of a flunkey is beneath the dignity of a man and must react on his character. If this feeling is sound, then the number of workers whose self-respect would suffer, if they realized what they were doing, must be very great; for the weavers who weave plush, and dyers who dye it, for the flunkey's breeches, are as useless as the flunkey himself. Specialization, by making it more and more difficult to assign to its ultimate destination any piece of work, is breaking down this discrimination between occupations in accordance with their object; the same firm may supply paper for Bibles and paper for letting contracts. At the same time specialization, by distributing among a large number of workers the making of each single thing, takes out of work the handicraftsman's interest in the thing made; it is possible to take in the making of a pair of boots something of the artist's interest in the making of a picture; it is difficult to take the same interest in the clicking of an upper to a sole.

Process. — Object and process act and react on each other. An interesting object will be interesting to make; while an interest in the making is likely to be reflected in the object. It is hard to find work in which the workman takes no interest at all; but there are great variations in the intrinsic interest of work, and much work that has only a negligible interest. At one extreme is the work of the artist, an activity so satisfying that it is claimed (by the advocates of art for art's sake) that the consumer of the product need not be considered; at the other extreme there are operations so mechanical as to call for no intellectual effort and only a slight and uniform physical effort. An ideal social system would give to every one a share of both kinds of work. Man is not a machine, and to treat him as one is to make him something less than a man. If the process of work is to contribute to welfare, it must have variety. Variety is needed to give scope for initiative and choice; work without variety exercises only a part of the man, and the faculties which are not exercised tend to atrophy. Art is good work, because it has an infinite variety; it is an unending exploration; once the artist begins to repeat himself, to do the same kind of thing in the same way over and over again, his work becomes conventional and loses its quality. Bad work is exemplified by the tending of some automatic machines; the worker is part of the machine; there is no room for the exercise of choice, no scope for originality; what he shall do and how he shall do it is determined for him, and it is his business to fit himself to the routine of the machine; once the routine is learned no further call is made on his intellectual faculties, and the range of movements may be so narrow that only a small part of his physical powers are exercised. The effect on such a worker of the mechanical monotony of his work may be counteracted by influences outside his work, but his work is such that it contributes nothing to the development of his faculties; his work is so much time taken out of his life, so much vital energy turned to waste, so far as the development of himself is affected. The creative worker by contrast is most alive when at work, and receives a full reward for his work in the pleasure of it and the addition it makes to his personality whether he be paid for the product or not.

Control. — With the process of production the control of production is closely connected. Where the process of production is subdivided and subdivided, and the human element linked up with power machinery, the individual worker will have little control over his life at work, he will have little freedom in the sense of self-direction, little independence. The speed, order, and conditions of work will all be set for him; initiative, responsibility, direction will be concentrated on the few and taken out of the work of the many. Specialization involves the subordination of the detail-workers to the organizers of industry, and such subordination gives an opening for tyranny; the modern worker has enlisted in an army in which discipline, the subordination of the mass of individuals to authority, is just as necessary to the system as it is in any military force. When capitalism — the private ownership and control of the nonhuman element in production — is added to specialization, the individual worker's freedom is limited still further; but even with public ownership of capital, the system involves the subordination of the many to the few, it affords openings for speeding up, bullying, victimization; public employees are not the most contented

class of the community. Where on the other hand the process of production is not subdivided, so that work retains its variety, there the independence and self-direction of the worker survive; the same person has to decide what to do, how to do it, at what rate to work, and how coöperation with other workers shall be organized.

According to most views of welfare, it is better for people to control their own actions than to have all their actions dictated to them; initiative is better than blind acquiescence in the initiative of others. This belief is the basis of political liberty or self-government; the right of every one to a share in the government of the country is regarded by the democrat not only as a means of securing a just and efficient government, but as a fundamental attribute of citizenship; democracy or political liberty includes the right to misgovern oneself. Slavery is regarded as an evil and forbidden on similar grounds; the slave has no legal control over his own activities. If work then is to contribute to welfare directly, and not only indirectly through its product, the control of work must be diffused as widely as possible, the work of "management" must be distributed, methods of voluntary coöperation devised to take the place of the direct imperative of the captains (and the other officers) of industry. It should be an aim of economic organization to reserve to the individuals in it as ample a control over their own activities during work as is consistent with the end of work being achieved and wealth produced; the two aims must be balanced against each other, and neither be sacrificed to the other.

IV

The Sacrifice of Producer to Product

The Survival of "Little Masters." — In the light of this double end of the economic organization, certain forms of organization, which are condemned when judged merely by their productivity, acquire a new interest, since they may contribute to welfare directly, out of all proportion to their productivity. Small firms multiply in industries in which all the economic advantages seem to lie with large firms, because enterprising men prefer to be their own masters. The "little master" system of manufacture, when the little master is really his own master and not the slave of the middleman, draws strength to survive from the same motive. The hand-loom weavers of the early nineteenth century, even under the pressure of extreme poverty, refused to enter the factories where their lives would be ordered by the factory bell; and the peasants of the same generation, who lost the status of independent farmers through inclosures, felt themselves wronged in spite of the experts, and transmitted the feeling to their descendants.

The Coddling of Agriculture. — An importance is sometimes attached by statesmen to agriculture, and especially to small holdings, which is not justified by the ordinary view of production. If the products of an industry can be obtained from abroad more cheaply than they can at home, it is considered good policy to import them, and to develop for export some industry for which the country has greater advantages; in the case of agriculture alone, Free Trade politicians are not content with this policy, and propose all sorts of subsidies, such as loans and railways below cost price, and interferences with the normal course of economic arrangements, such as State-fixing of rent and wages. In the case of other forms of wealth the owner is allowed to use it as he will, not so in the case of land; it is not wrong to keep for one's pleasure a twenty-roomed house in an overcrowded city, but apparently it is wrong to keep for one's pleasure land that could be used for small holdings. The exceptional position among occupations thus attributed to small agriculture is often a mere piece of sentimentalism; but it has sound justification.

The work of a farmer has more variety, more room for initiative and self-direction than the work of the ordinary artisan or foreman; and agriculture is the chief branch of production in which economic advantages are not on the side of large-scale production. The German statesmen of the early nineteenth century who preserved their small farmer class had a wider conception of welfare than the English statesmen who sacrificed their peasant class to increase the productivity of land.

Coöperation. — From this point of view again the coöperative movement in industrial organization acquires an enhanced importance. Coöperative stores to a slight extent and coöperative associations of producers to a very great extent distribute the work of industrial management; they avoid that subordination of companies and regiments of workers to the will of a single "captain" of industry, which is the mark of private employment. The very difficulty of organizing them is an additional reason for persisting in the attempt to organize them, since the difficulty consists in inducing people to work together without compulsion, and nothing develops the pleasanter sides of human nature more effectively than the practice of such voluntary coöperation. The moral effects of the system are a more important part of its claim than its economic results.

Work and Personality. — Work, then, if it is to contribute to welfare directly, should be such as to develop the worker's personality. For this it must have variety, it must be responsible, it must afford him scope for initiative and self-direction; there must be individuality in the object, the process, and the control of work. If all work were of this nature, the curse of Adam would be overcome. It is impossible that all work should be of this nature; but much more attention might be paid to this influence on welfare in schemes of social reconstruction. The principle lacks recognition that workers are entitled to be treated as persons, not merely as "hands"; William Morris met with little response when he preached the gospel of work as a way of life as well as a means of livelihood, a gospel he could preach because he practiced it. The chief tendencies of modern industry are against the recognition of this principle, because the underlying principle of them is specialization. Specialization is enormously productive; product is obvious and can be measured, while the other influences of the economic organization on welfare cannot be measured and are easily overlooked. Requiring a large and uniform output, specialization destroys individuality in the object of work; by subdividing the process of manufacture, it prevents the workman from having an interest in the manufacture as a whole; by simplifying processes it makes them mechanical, and therefore fit work for machines, not for men; and instead of diffusing control and responsibility it concentrates them on a few "captains of industry" on the specious ground of efficiency — efficiency meaning, in nearly every case, the sacrifice of the worker's humanity to the needs of material production. In pursuit of the economies of specialization individuals have, by private contracts, created an economic system which no individual can control, and which controls every individual.

Importance of Nature and Conditions of Work. — There are two reasons especially why the influence which the nature and conditions of work exert upon welfare needs attention. The first is that the product, to which specialization tends to sacrifice the producer, is in so many cases worthless measured by any but commercial standards; as we have seen, many of the goods and services that constitute modern wealth contribute nothing to welfare, and may even by destroying the taste for better things detract from welfare. The other is that work is an influence that none of the masses escape. Except the home, it is the most important social influence we have to reckon with in the formation of character. The elementary school reaches all, but only up to the end of childhood; other forms of education touch only a fraction. Organized religion touches an even smaller fraction than the continuation school. Conscription down to the Great War was the exception in English-speaking countries. Even the home, under the pressure of the economic system, which treats the individual, not the family, as the unit of society, is losing the influence it possessed. On the other hand, work must always have the first claim on a man's energy, time, and ability. Leisure and all its possibilities may be, and in many cases will be, abused; work is conditioned by forces which the individual does not control. If, therefore, society organizes industry so as to make work mechanical, the people will be mechanical; if it allows no scope for the exercise of the æsthetic faculties, these faculties will tend to atrophy; if initiative and responsibility are taken out of the work of the ordinary man and concentrated on "captains of industry," the ordinary man will become a creature of routine, incapable of responsibility; and society will not be sure even of a continued supply of "captains." The wise use of leisure may counteract these tendencies; but there is no certainty that leisure will be used wisely, while the influence of work is certain.

Recognition of Relation between Work and Welfare. — The influence of work on welfare is not without recognition. William James described the introduction of manual training as the most colossal improvement which recent years have seen in secondary education. The separation of physical and mental labor which modern industry favors is seen to be bad for both manual worker and brain worker. Educationalists are beginning painfully to reproduce in the schools the kind of training that handicraft used to give at work; an educational system is a necessity only under a system of uneducative work. Before the rise of modern industry, much more importance was attached to the point of view of the producer. Industry was regulated by associations of producers, gilds, and companies, to whom was left the regulation of conditions and quality. The manual worker has always refused to adopt the economist's way of looking at industry solely from the point of view of the consumer; for him conditions are as important as wages; speeding up, overtime, petty tyranny, and victimization are evils as great as low wages; the trade union is for him the fundamental social organization, because it is elastic in its objects and can be directed against any of these evils. Hence the significance of the latest manifestation of the democratic spirit, Syndicalism, the claim that the workers shall control the conditions of work.

To criticize Syndicalism on the ground that the adopting of its proposals would decrease the product of industry is beside the point; its criticism of society is based on the view that conditions are as important as product. To object that its practical proposals are visionary and unpractical, even if true, does not affect the force of its criticisms; the proposals of Owen and the Utopian socialists were unpractical, but their criticism of anarchic individualism in industry was sound, and their assertion of the need of social control of industry has received the sanction of subsequent legislation. The attitude to reform against which Syndicalism is a protest accepts the materialist assumption of the present economic system, that economic welfare depends on the amount of product; it is illustrated by the remark sometimes made that the Industrial Revolution solved the problem of production, while the task of this age is to solve the problem of distribution. So far from the Industrial Revolution solving the problem of production, it would be truer to say that it created it. The whole-hearted acceptance of the principle of specialization, which was the essence of the Industrial Revolution, leads inevitably to the sacrifice of the producer to the product; a reformed distribution, desirable in itself, would merely compensate him by giving him a larger share of the product — in much the same way as a Railway Company cripples an employee for life, and "compensates" him with a payment of a couple of thousands of dollars. The Industrial Revolution has left the whole Western world with the liability on its hands of a population many times as great as it was before — a population so dense that society cannot dispense with specialization, in spite of its evils. From the point of view of those evils, however, socialism is a mere palliative; indeed the State, when it takes over any service, exaggerates them, carrying specialization to hitherto unknown lengths by the creation of "experts," and by centralizing responsibility and initiative to a degree unknown in private industry. Aristotle defined a slave as a "living tool," and the phrase describes precisely the wage-earners in industries that have passed through the Industrial Revolution; the majority of Government employees are in the same category.

CHAPTER XXV

WEALTH AND WELFARE — BUSINESS AND MORALITY

I

Welfare Regarded as Independent of Wealth in Some Systems of Morality

We have seen that money, the measure of wealth, is a very inadequate measure of the welfare afforded by the economic organization; the product of that organization is only one channel through which it influences welfare. How little this measure may tell us about welfare, however, we can realize only when we remember that in some important ethical systems wealth is treated as a very subordinate influence on welfare, welfare being attainable only by subordinating wealth to other influences on welfare. It falls outside the scope of economics to define welfare, but it is necessary to an understanding of the limits of economics to point out that such views of welfare and wealth are held. The sources of human satisfactions or welfare may be divided roughly into two classes, internal and external sources; wealth is one of the external sources. Materialism is the subordination of the internal sources of satisfaction to the external; most religions exalt the internal over the external, and teach that welfare lies in the former, to which the latter must be sacrificed: "The Kingdom of Heaven is within you."

Different Attitudes Toward Wealth. — The religious view of wealth is not so inconsistent with common practice as at

first sight appears. Wealth seems to be *an* aim of every one and *the aim* of many. Many, however, who seek it seek it merely as a means to other things. A Cecil Rhodes will seek it as the means of realizing his political ideals; and others, without his idealism, will seek it as the index of social success. Under the system of free enterprise, wealth is the chief means of power and influence over others; if other means were devised, they would be sought by the people with ideals to realize, and the people with no clear ideal, but only personal ambition to satisfy, would follow suit. In England an ambitious man gives up accumulating wealth after a time, and goes into politics or buys a title; in America, where there are no titles, and politics are often subordinate to finance, he goes on accumulating wealth indefinitely, not for its own sake, but as the only source of influence and the only index of success. The Christian view of wealth would seem to be that wealth is less important for welfare than the internal sources of satisfaction; an increase of wealth is not necessarily an increase of welfare, and wealth should not be allowed to stand in the way of other kinds of welfare; it is not impossible for a rich man to enter the Kingdom of Heaven, but his riches are as great an obstacle to entering the Kingdom as a camel's load is to passing through a postern gate. It is not of course contended that an increase of wealth brings no satisfaction and adds nothing to welfare, but only that satisfactions derived from external sources are the more transient, and to build one's welfare on the possession of wealth is to hold it by a precarious tenure. And this view of wealth is supported by the practice of the great mass of mankind. Even in the countries that have passed through the Industrial Revolution, the working classes and the professional class seek a secure sufficiency rather than a constant increase of wealth; their chief interests lie in other directions. The rich use their riches to deprive themselves of the comforts of civilization and to gain opportunities of experiencing the hardships and excitement of primitive life, hunting big game or climbing mountains; the schools of the rich, especially in a country like England, teach hardship rather than comfort. The rich *as a class* are no happier and no better than the poor *as a class.*

If we compare different ages and countries, we are struck by the apparent unimportance of wealth. The materialist regards the vulgar plenty of the twentieth century as greatness; others will regard its art as a better index of an age or a country's temper. Whichever is right, the two great ages of art, the two periods when craftsmen were artists and the appreciation of art was general, were ages of extreme material poverty; and few will assert that the age of Arkwright was greater than the age of Pheidias, the civilization of Chicago than the civilization of Athens; few, who have studied both and compare achievement with opportunity, will place the art of the thirteenth century below the art of the Victorian age, the age that built the cathedrals below the age that restored them. As society has grown richer, art has become more and more the concern of little cliques and coteries, less and less a part of the everyday life of ordinary people, until to-day we have countries like the United States, so rich that its Whistlers and Sargents fly to the poorer countries of Europe. If religion rather than art be taken as index of the age or country's temper, the comparison will be even less flattering to the richer modern countries.

II

The Economic Organization not Necessarily a Reflection of Current Moral Standards

Is Welfare an Economic Question? — It is sometimes maintained that the considerations which have occupied us in the last few pages are both irrelevant and unnecessary. They are irrelevant, it is maintained, because they are ethical, not economic, considerations. Economics is the study of the social organization for satisfying wants, the means of satisfying which are limited in quantity; the organization can be studied, and its efficiency judged without going into the question of the kind of wants society seeks to satisfy. They are unnecessary, because the system of free enterprise insures automatically that the economic organization and its products will conform to the standards of taste and conduct of the time. Those things are made which are wanted, since there is freedom to make anything; those methods of production are adopted which society thinks best, since the State prescribes no set form of organization; those economic relations are established that give a maximum of convenience, since the individuals in society are left free to establish what relations they think best. The economic organization is responsive to every change in the direction of people's wants and ideals, and is therefore the necessary outcome and reflection of current views of welfare. Business is neither moral nor immoral; it is neutral, directing itself to meeting whatever wants are expressed. If the results of the economic system are repugnant to our moral sense, we must take steps to change the moral ideas of the people whom the economic system serves; the economic system being merely responsive to demand, we must change the nature of demand. Reform must come by changing the public's standards of satisfaction; to attack the organization for satisfying wants is to tinker with symptoms and to neglect the cause of the evil.

Economic Evils as Symptoms. — This objection to our argument contains an important half truth. Undoubtedly to a certain extent the economic organization is responsive to changes of taste and conduct, and its works are a reflection of them. If people are bad, under any system the products of industry will be bad; if they are careless of beauty, the products will be ugly; if they are careless of one another's rights, there will be oppression and injustice; if they are selfish, there will be an unequal distribution of the benefits of the organization. Conversely, any improvement in morals will affect the economic organization. The greatest social evil of the day is not the inequality of wealth, but the selfishness and insensibility to the sufferings of others that makes all attempt to secure greater equality so difficult. If the Christian Churches' preaching of the unimportance of wealth and the duty of unselfishness were effective, the path of reform would be smoothed. The objection is important, too, because it underlies much of the opposition to all attempts to moralize the economic system by State action. The system, it is thought, is an automatic system; free enterprise insures that it will reflect current morality, and it can be improved only by raising the level of current morality.

Fundamental Character of Economic Evils. — In spite, however, of the half truth it contains, the objection is unsound. It exaggerates the responsiveness of the economic organization to changes in standards — we are bound to examine how far it is responsive; it is quite without justification in assuming that private arrangements between individuals are either the only or an adequate way of moralizing the economic organization; and it ignores the reaction of the economic organization on standards of taste and conduct. The economic organization is responsive to demand, but demand is not the same thing as want or need; demand is no guarantee of desirability by any standard other than those of the market. Not need but purchasing power gives the direction which production shall take. The economic system is responsive to people's views only in so far as they can exercise purchasing power. Those who devote themselves to altruistic objects and neglect the pursuit to private wealth will exercise little influence on the system through the ordinary channels on which the policy of free enterprise relies; a St. Francis, vowed to poverty, would have no influence through those channels at all. Those, on the other hand, who subordinate everything else to money-getting will exercise the greatest influence. The organization would be responsive to need, it would reflect the moral and æsthetic standards of the age, only if wealth were equally distributed.

Difficulty of Determining Welfare. — Even if the condition that purchasing power must be fairly evenly divided were satisfied, the system of free enterprise would not insure conformity of the economic organization to the moral standards of society. Only if people, when they made their purchases or entered into other economic relations, did exactly what they knew or thought to be their highest interest would such conformity arise from freedom of enterprise. The argument that free enterprise is all that is needed to insure conformity of the economic organization to current standards ignores the unfortunate tendency in human beings to do what they know to be bad for them and to leave undone what they know to be good for them — the tendency that theologians call " original sin." The argument is the argument of anarchy; it goes further than the advocates of free enterprise recognize, and would leave no room for the State at all. If economic relations and activities can be left to the " free enterprise " of individuals, and the State be confined to enforcing their private contracts, so may other relations and activities. If " free enterprise " or *laissez faire* will secure the conformity of industry to moral standards, why not of everything else? Why not leave the relations of the sexes to unrestricted freedom of enterprise?

Broader Implications of *Laissez Faire*. — Indeed, the policy of free enterprise or *laissez faire* is an expression of the same social philosophy, and based on the same conception of human nature, as the policy of " free love." That conception is the rationalist conception, on which utilitarian individualism was based — the conception that people will do what is reasonable without assistance, so that all that is needed is to set them free to pursue their enlightened self-interest. On this conception of human nature all laws are unnecessary. Laws, so far as they are good laws, require people to do only what is reasonable and in the best interests of the community: if people can be relied on to do what is reasonable and in their best interests, just because it is reasonable and in their best interests, laws which *force* them to do so are obviously not needed. In practice the fact that a thing is reasonable and to their interest is not sufficient to insure that people will do it: most people, if they are candid, will sometimes confess with St. Paul: "That which I do, I allow not: for what I would, that do I not: but what I hate, that do I." In minor matters as well as in major — they take more drink than is good for them, food which they know will disagree with them, buy clothes they cannot really afford, idle when they know they ought to be working, sit up when they know they ought to be in bed, lie in bed when they know they ought to get up, and hurry into their clothes when they know a cold bath would be good for them: and in their economic relations they display the same human, if irrational, weakness. To overcome this tendency they need all the supports they can devise, and the State is one of the strongest supports they have devised. Everybody knows that it is bad to steal, to kill, to commit bigamy, to exceed the speed limit; but we do not rely on that knowledge to prevent these crimes, and we have therefore made arrangements through the State to prevent them. We are constantly passing laws to register a rise in the level of our morality and prevent any lapse below it in the future. Not only do we make secure in this way advances we have made, but we habitually use legislation to screw up the level of morality a little higher than it is. No department of human activity that has a social aspect can be exempt from this action of the State, and industry to-day is of all activities the most social. If all men were Christians, economic relations might perhaps be left to the unregulated enterprise of private contract, because all men would have been cured of original sin, this tendency to sacrifice their higher interests to immediate gratification or sheer inertia; as they are, however, men cannot dispense with the checks they impose on their impulsiveness and selfishness through the machinery of the State. The moral standards of society embody the average conception of our highest interests: they will not for that reason by itself have an effective authority over the individual, but require all the buttressing that the State, law, religion, and education can do to uphold them.

We cannot therefore ignore the bearing on wealth of different conceptions of welfare, on the ground that under a system of free enterprise the economic organization and its products will automatically conform to the current conception of welfare and reflect every change in it. To the extent to which enterprise is free, we shall expect the morality of business to fall below the moral standards of the time, and we shall not be surprised to find that the economic organization in the past has been moralized by the direct action of the State quite as much as through the economic actions of individuals: the abolition of slavery, the reform of the early factories, the abolition of infant labor in mines, the regulation of dangerous trades, the prevention of deleterious adulteration, the prevention of excessive drinking, to take only a few instances, have all needed the intervention of the State.

III

Reaction of the Economic Organization on Moral Standards

Materialistic Reaction. — Nor can we exclude all consideration of different views of welfare on the ground that wealth and welfare are distinct and can be studied each in abstraction from the other. The two things can, of course, be separated for purposes of study, but not permanently, because they are not distinct: the economic organization is not the mere outcome of our conception of welfare, it reacts upon it. Different systems of morality produce different types of economic organization, but, just as truly, different economic systems produce different types of morality; the economic organization is not like a motor that will take us anywhere, it will take us only in certain directions, and may even run away with us. The reaction of the economic organization on social standards of conduct is similar to the more obvious reaction on standards of taste. It is easily seen that it is only nominally responsive to æsthetic demands; it is adapted to producing quantity so much more than quality, "standard" mechanical articles so much more than individual and characteristic articles, that society is forced in practice to take the former instead of the latter; taste is formed on the objects it contemplates, and smooth finish comes to be preferred to vigor of design, the novelty of transient fashion to true originality based on tradition. In the same way the economic organization facilitates certain kinds of conduct and favors the development of certain types of character, and handicaps other types of character. The direction which its influence takes is due to the identification of wealth with product. We have seen that it makes increase of product the sole end of its organization; the principle on which it bases distribution is productivity or contribution to product; it estimates the increase of wealth solely by measuring product — so far as it can be measured. Now if we treat product alone as wealth, and arrogate the term *wealth*, which in a broad sense means anything that satisfies a want, to *product*, which covers only external sources of satisfaction, inevitably we suggest that the internal sources of satisfaction are not wealth, we give a materialistic tendency to our aims and values. This the present economic system does, because it is based on this narrow conception of wealth.

Influence of Definiteness of Economic Values. — Certain incidents of the system accentuate the tendency to materialism.

The first is that wealth in this narrow sense is definite and measurable. There are other scales of value — moral, æsthetic, political — in which actions and qualities which have a low economic value — self-sacrifice, heroism, beauty, "the pure, gemlike flame of devotion to art," for example — have a high place; but economic values are the only values definitely measured. The measure means little, the definiteness disappears when we look beneath the surface and find that economic values change with every change in the distribution of wealth; but wealth retains this advantage over internal sources of satisfaction, that it is subjected to a quantitive measure and stated in terms of a unit. This superficial definiteness gives economic valuations an advantage when they come into conflict with other valuations, because the influence of an idea on conduct depends very largely on its sharpness of outline; definiteness commands assent, while vagueness invites questioning. When, therefore, a community or an individual has to choose between a course of action which will add to wealth and a course of action required by a vague but just sense of honor or duty, the fact that the advantage of the former can be stated in terms of dollars and cents gives it an influence it would not otherwise exert. The influence is exerted most frequently, however, when different conceptions of advantage are competing and there is no obvious conflict between advantage and duty; in expenditure on education, for example, the appeal of technical education is nearly always more forcible than the appeal of liberal education, because the results of the former can be stated in the addition of so many dollars a year to the earning capacity of the student, or the addition of so many dollars' value to the trade of the town, while the latter merely makes better men and women. Additions to wealth, being measurable, are spoken of as "solid," "material," or "practical" advantages; all other additions to welfare are lumped together as "matters of sentiment," by implication unreal, unpractical, and immaterial. The economic measure is a useful aid to the study of wealth, it becomes a danger when its limitations are ignored; if science is measurement, wisdom is the appreciation of that which cannot be measured.

Influence of Individual Insecurity. — A second incident of the present economic system which accentuates its materialistic tendency is the insecurity of the individual's economic position under it. This insecurity is claimed as an advantage, since it exerts a constant pressure on the individual to work, and so insures the maintenance and increase of the flow of wealth. The organizers of production have to "get on or get out," the lazy among the working class are kept to their work by the fear of unemployment, the investing class are compelled to watch their investments, and therefore to apply their capital to the most productive uses, by the losses that quickly attend bad management of a company. No one is guaranteed his position, his income, his work, or his trade connection; each is left to get out of the economic organization only what the competition of others will allow him to get. Two results follow: first, the minimum of wealth, which is necessary to a reasonable life and with which idealists of all sorts would be content, can be secured only by a constant struggle to get more than the minimum. A man may be genuinely anxious to take no thought for the morrow; but he has his living to think about, and a living can only be secured by constant taking of thought for the morrow. However little a man cares about wealth he is forced to be constantly thinking about it; hence wealth and wealth-getting activities have an importance in modern life that bears no necessary relation to their contribution to welfare. Secondly, the increase of wealth which the system induces is unevenly distributed; if the poor do not get poorer, the rich get richer. Hence social standards of expenditure are constantly upset; the pace is made by the energetic and acquisitive, and the great mass of ordinary people, who would be content with what they have if only these others would be content also, are made to feel poor by comparison. A system based on contract rather than status may make for the increase of wealth; but happiness depends more on security of status than on increase of wealth.

Influence of Method of Distribution. — A third incident of the system, strengthening its materialistic tendency, is its method of distribution. The essence of morality, on any except a crude materialist view of morality, lies in distinguishing between kinds of satisfaction; the essence of the present economic system is that it makes no distinction at all between kinds of satisfaction in distributing rewards. The principle on which the distribution of income is based, so far as it is based on any principle, is that of productivity; the aim of the system may be said to be to secure for each a share of the product proportionate to the contribution to production made by his labor or his property; and anything that satisfies a want, without distinction of kind of satisfaction, ranks as product. We pay a publican more for making a man drunk than for keeping him sober. In taking this attitude the economic system may merely reflect current morality and taste. We have seen reason for thinking that it does not, since it responds to casual impulse rather than to deliberate choice; but whether it reflects current morality or not, it does ignore distinctions in kind of satisfaction, and by so doing inevitably suggests that distinctions in kind of satisfaction are negligible. We need not believe that the hope of material reward is the only motive of action in order to recognize that the distribution of material rewards influences action; if, therefore, in the distribution of the material rewards at the disposal of industry the distinction between permanent services and transient satisfactions is ignored, the distinction between them will be weakened in the public mind.

Further, while the principle of the present system of distribution is contribution to product, there are many exceptions to the principle. A considerable number of incomes, we have seen, consist of payments received for no service, but the reverse of service; monopoly profits secured by restricting supply, speculative profits made by producing artificial price-fluctuations, the unearned increment of land withheld from the market during the growth of a town, make individuals rich at the expense of the community. Riches so obtained, however, have the same purchasing power as riches obtained by serving the community; they give their owner the same influence over the lives of other members of the community. Hence the distinction between social and antisocial effort tends to be obliterated; wealth is respectable, however won, and great wealth is honored, because it is powerful, whatever its source. The extreme complication of the modern economic system helps this confusion. It is often difficult to ascertain how wealth is acquired, difficult to follow out all the effects of a certain way of acquiring wealth; it is easier and much simpler to give up the attempt to discriminate, to lump together all methods of making wealth, and to concentrate one's endeavors on securing a good use of wealth. It is increasingly difficult for the investor and consumer to make sure that he is not profiting by native slavery, sweating, or some other way of exploiting the weak. Because industry is social the individual seems helpless in the face of its evils, and the feeling arises that morality and business are something apart, that business is something outside the scope of the ordinary canons of morality.

IV

Materialistic Tendency of Economic Influences To-day

In considering the action and reaction on each other of the economic organization and morality, it is difficult to disentangle cause and effect; so much, however, is clear, that the economic organization, by lending itself so readily to the materialistic tendencies of society, strengthens them at the expense of the idealist tendencies. A saloon at every street corner may not *cause* drunkenness, it does very seriously increase the difficulties of the drunkard who is trying to reform himself; in the same way an economic organization which serves all kinds of wants indifferently and rewards all kinds of satisfactions indifferently may not *cause* materialism, but it certainly strengthens any tendency to materialism there may be in society. Materialism may of course be right, pleasure may be the true end of life; here we are only concerned to point out the tendencies of the present economic organization, and these are to support materialism.

Habitual Pursuit of Wealth. — The extent to which the economic system influences the conception of welfare may be overlooked, because it seems absurd on reflection to identify wealth, the means of welfare, with welfare itself; any one who asks himself the question what wealth is for, must perceive that it is only a means to something else. So few people, however, do ask themselves the question; the identification of wealth and welfare is unconscious; the belief is not avowed. The existence of the belief, however, is to be traced in its effects. The pursuit of wealth, by the individual or the community, becomes habitual; and the question how far the satisfaction given by any increase of wealth is worth the trouble of obtaining it, is seldom raised. Progress is conceived as the mere multiplication of material things; and countries which have thought more of the use of wealth than its increase, and work to live instead of living to work, are stigmatized as "unprogressive." Every social reform has been opposed on the ground that it might "dry up the springs of wealth," and the advocates of the reforms have usually taken the same ground as the opponents and argued that the reform would bring no decrease in wealth. The system of free enterprise, in which no one's status is secure and peace is not a harmony, but merely an equilibrium of hostile forces, is defended (and often criticized) solely from this point of view. Statesmen advocate the feeding and medical treatment of school children, not on the ground that the children suffer, but on the ground that the expenditure will be an " investment," and will increase wealth in the future; their true motive may be sympathy for the children, but they dare not avow it and must plead material expediency. Continuation schools are usually treated as an aid to industry, and their work made narrowly technical. Frequent complaints are made that elementary education is not equally " practical " or " useful," which means equally adapted to subserve the needs of industrialism. Attempts are even made to capture the universities for the same mean ideal, that man exists for production and the aim of education must be to make ever more efficient producers; an eminent educationalist has defined universities as " the technical schools of the brain-working classes "! It is impossible to make some people see that as great an addition to welfare is made by teaching a boy to enjoy a book as by teaching him to print or bind it, by giving him a love of some art as by instructing him in some technical craft, and that education should be treated not as an aid but as a palliative of industrialism; the end is forgotten in the means:

> their vision is
> Machines for making more machines.

The treatment of the rich illustrates the same tendency. An artist may have to wait till he is dead for the fame which compensates him for poverty; a prophet is not so much without honor as ignored or treated as a joke. The millionaire, on the other hand, whether his wealth be the reward of real services to the community or the profits of a successful corner in wheat or due to the accident of birth, has everything that society can give lavished upon him. Churches give him the first place in their councils, and universities confer degrees upon him. His most casual utterances on subjects he does not understand are treasured as the words of wisdom; and the more democratic his country is, the easier it is for him to attain to political power.

Dependence upon Wealth Standards. — How profound, however, is the influence of the economic organization on moral standards is shown perhaps best by the usage of ordinary speech. Political idealists speak of the flag, the symbol of nationhood, as " the greatest asset " of the nation. Political corruption is denounced on the ground that it is " bad business." War is deprecated because it no longer " pays." Honesty is commended because it is " the best policy." We say, in what Gissing called " the vulgarest saw that ever disgraced a nation," that " time is money "; we measure a man's worth by his wealth, and say he is " worth a million "; we frankly identify wealth and welfare by describing a man as " well off " or " badly off " according to his income. Dishonesty, when successful, is admired rather than the reverse, as " smartness "; and the characteristics that business develops — self-assertion, keenness, and an insensibility to fine scruples and feelings — are the very reverse of the humility, content, and self-sacrifice inculcated by the professed religion. It was this materialism, or " utilitarianism " as Morris called it, " which, being interpreted, means the reckless waste of life in the pursuit of the means of life," that the idealists of the nineteenth century, Carlyle, Ruskin, and Morris, attacked; all attributed it to the same cause, the influence of the economic system established by the Industrial Revolution; and all extended their attacks to the economists who explained the system, for ignoring the effects of the system on standards of taste and conduct.

V

How Wealth Contributes to Welfare

We may now summarize our discussion of wealth and welfare, and state such conclusions as can be drawn from it. The word " wealth " is used in two senses: in the sense of product, the ordinary sense, and that in which it is used in Economics; and as meaning welfare, the sense in which Ruskin used it. We decided to keep the word " wealth " for product and use the word " welfare " for the second sense; the object of our inquiry was to discover the relation of wealth to welfare. Wealth, we found, could be measured, and the best method of procedure seemed to be to inquire how far the measure of wealth indicated welfare.

In the first place, we found the measure of wealth defective, since it takes account of some kinds of property that are not wealth and leaves out of account some forms of wealth that do not come into the circle of exchange. Secondly, we found the measure of wealth misleading, because the value of a thing does not indicate the absolute amount of satisfaction the thing gives, depending as value does on the distribution of purchasing-power. Thirdly, we found that the measure of wealth, strictly in accordance with the usage of ordinary speech, takes account only of amount of product; the satisfaction or welfare derived from wealth, on the other hand, depends largely on the use of wealth by society and the individual, *i.e.* on distribution and consumption. In the fourth place, the measure of wealth ignores the important influence of the economic organization on welfare, exercised directly through the nature and conditions of work, not indirectly through the product. We noted also that in some views of welfare wealth was treated as a comparatively unimportant if not negligible factor.

The objection to this inquiry that it was unnecessary we decided to be unfounded. The ground of the objection was that the economic organization, owing to freedom of enterprise, was responsive to all changes in standards of taste and morals, so that the use of productive powers and the conditions of production must be the outcome and reflection of current conceptions of welfare. On examination we found that freedom of enterprise did not necessarily make the economic organization responsive, and that the tendency of freedom of enterprise was to make the organization and its products fall below the level of current standards; in any case the economic organization could not be the mere outcome of current conceptions of welfare, because the economic organization reacts on our conceptions of welfare, favoring the development of certain aims in life and types of character, and discouraging others. The influence of the present economic system we found was strongly materialistic, in the sense that it encouraged reliance on external rather than internal sources of satisfaction.

For the same reason, that the reaction of the economic organization on standards of taste and conduct, and therefore on the whole conception of welfare, is one of the most important of the social aspects of business, we put aside another objection to our inquiry — the objection, namely, that any discussion of the relation of wealth to welfare, being an ethical inquiry, was irrelevant to Economics. There is, however, a more cogent reason for putting aside the latter objection to including a discussion of the relation of wealth to welfare in an outline of Economics. Study, at any rate economic study, is for action. The immediate object of economic action is wealth, but the ultimate object is welfare, to which wealth is a means. Unless therefore our economic study tells us to what extent and under what circumstances an addition to wealth is an addition to welfare, it will not help us much in attaining the object of our action. The definition of welfare would be an ethical inquiry, but we have not attempted such a definition; all we have tried to do is to define wealth, and to show exactly what the measure of wealth does measure and what it does not. Study is for action, and without such an inquiry we should not discover the limits within which economic considerations may properly determine action. The practical justification of our procedure is that half the discussions of wealth are carried on at cross-purposes and lead to nothing, just because the parties to them use the word *wealth* without distinguishing between its two senses of *product* and *welfare*.

This negative method of stating the relations of wealth and welfare was forced upon us by the necessity of avoiding in an economic inquiry the ethical question — the question of the nature of true welfare. Without committing ourselves to a discussion of that difficult and controversial question, however, we can state in a positive form the conclusions to which our inquiry points on the relation of wealth to welfare.

The Necessities of Physical Existence. — Wealth is a means to welfare; not, according to most views of welfare, the only means, but an important means. It is a means to welfare in two ways: (1) *some* wealth is the indispensable condition of physical existence, and therefore the basis not only of health but of every intellectual and spiritual activity; (2) any addition to wealth above that indispensable minimum is a means to welfare by increasing man's freedom. It is not necessary to define the minimum or to mark it off by a hard and fast line — it must be allowed to include something more than the bare means of sustaining physical existence — but the distinction is important. Without the minimum there can be no real freedom, in the sense of self-determination; until it is won, the man's activities are all determined for him by his physical needs. And it must be secure, or the life that rests upon it, however noble and far-reaching its activities, will be built upon an insecure foundation. The great service that the Industrial Revolution did was, by increasing man's powers of production, to put it within the power of society for the first time to guarantee to every man this minimum. So long as this minimum is insecure, the individual must always be liable to worry within and tyranny from without; for this reason security is more important than any addition to wealth, for this reason the workers demand a State guarantee of security, in the form of " the right to work," in preference to any schemes, however generous, of profit-sharing. The distinction between this minimum and the surplus of wealth is implied in Christian teaching, which enjoins the relief of distress while deprecating the pursuit of wealth; and there is nothing materialistic in making the security of this minimum for every member of society a chief aim in politics.

Wealth and Freedom. — Beyond this minimum wealth serves welfare by increasing freedom or liberty. Liberty used to be conceived as freedom from external control, and in this sense it was the aim of the movement which swept away the old system of protection and many other restrictions on freedom of action in the nineteenth century; when these had been swept away, the great majority of people were still not conscious of possessing liberty, and the old negative conception has given way to a positive conception, which is best expressed by the word " opportunity." Wealth gives liberty in this sense; it increases opportunity, giving the possessor more choice in the use of his time and fuller means of self-determination or self-expression. A man with wealth enough to live without working is, we say, " independent "; a person who has to rely on another for all wealth is that person's " dependent." The effect of an increase of wealth upon welfare may be neutralized by misuse or waste; the increase must be balanced against any change for the worse in conditions of production, and allowance made for the indirect effects which an increase in one person's wealth may have upon other people's welfare. But the increase in opportunity remains; there is a *potential* increase in welfare. The present age *might* be the richest of all the ages in welfare, as it is the richest in wealth. Perhaps it is; if it is not, it is because it has mistaken the means for the end, and treated the increase of wealth as an end in itself, instead of controlling it and directing it in accordance with its general conception of welfare.

VI

" Business Is Business " and Economic Laws

The Test of Economic Activities. — If the view of wealth we have reached is correct, the practical conclusion follows, that economic activities are subject to the ordinary rules of morality, and the economic organization is to be judged by its conformity to the ordinary standards of morality. Moral rules and standards embody our conception of welfare, and wealth is only a means to welfare. The immediate end of economic activities is cheapness, the production of a maximum of wealth with a minimum of effort and sacrifice; but wealth itself is wanted only as a means of welfare, so that economic activities must be accounted good or bad according as they promote or hinder not wealth merely but welfare. We can separate the economic aspect of a social problem for study; in the problem itself the moral and economic aspects are combined, and moral considerations are the decisive factor, because they embody our conception of the end to which all action is directed. To persist in an economic activity therefore, or maintain an economic organization which is contrary to our moral sense, is to subordinate the end to the means, or, in other words, to sacrifice morality to cheapness.

Moral Test of Business. — It is necessary to point this out, because it conflicts with a view of the relation of business to moral rules and standards, which is commonly held and not infrequently avowed. Put baldly, the view is that business is something outside morality, a department of life in which the ordinary rules of morality have no validity. The view, however, is seldom put baldly; more frequently it is expressed in the phrase " Business is business," and in that form is used to condone conduct in business which would be considered dishonoring in any other relation of life. The view is not so much that business *ought* to be outside the ordinary rules of morality, as that it *is*, the economic organization being something outside man's control, something for the principles of which he is not responsible. Just as in nature there is much that revolts the moral sense, but is beyond man's control, so the oppression, injustice, and " sharp practice " of business is supposed to be the inevitable outcome of a " natural " organization. In political discussion the view usually takes the form of an appeal to certain " natural " or " immutable " " laws of political economy," which are supposed to render futile any effort to moralize the economic organization by direct social action.

Origin of Present View. — It is not difficult to understand how such a view arises. The self-interest of the people who profit by the present organization unconsciously inclines them to it. The unconscious identification of wealth and welfare which makes people seek wealth for its own sake lends support to the view; it leads people to regard the steady increase of wealth as a complete justification of the organization. The belief which we have already examined, that the economic organization under free enterprise responds to every change in our standards, and therefore automatically conforms to them, leads many people to ignore the problem of moralizing industry and prevents any protest against the view in question. The chief ground of it, however, is the helplessness of the *individual* in the face of the evils of the economic organization. Moral responsibility is personal, the economic organization and its evils are social. The old-fashioned duties of charity and probity, that were adequate to a simpler economic organization, are apparently useless in the complex organization of to-day. The individual is part of a system that controls him; competition, the fear of losing one's place in the struggle, compels all to toe the same line of conduct, and an excess of scruple brings ruin; "things are in the saddle and ride mankind."

Inadequacy of Free Enterprise. — The power of free enterprise to bring the economic organization into conformity with current morality we have seen to be an illusion; on the contrary, if society does not impose its standards of taste and conduct on industry, industry will impose its standards on society. The idea that the economic organization is beyond control has even less foundation, being due to confusion of thought on the nature of what are called "economic laws" and on the relation of the economic organization to these laws. When the "immutable laws of political economy" are used as an argument against any proposal, the impression conveyed is that these laws are at one and the same time like natural laws, and therefore beyond human control, and like moral or statute law, and therefore not to be disobeyed; the suggestion intended is that the proposed reform is both futile and wicked.

Relative Character of Economic Laws. — The "immutability" of economic laws varies; the phrase is applied indiscriminately to all the general tendencies that study discovers in the economic organization, and these by no means all belong to the same order. Some are tendencies peculiar to the present system of free enterprise, which will cease to operate if the system is changed. The so-called "law of monopoly price" is an example; under private enterprise, monopolists tend to fix price and output at the level which gives them the biggest return of receipts over costs on the total output. Abolish private enterprise in monopolies, and you abolish the condition on which the "law" depends; the

State will tend to make the price as low and the output as large as is possible without actual loss. The "law of comparative cost" is another example; if trade is free, nations will tend to exchange with each other the products of those industries for which they have the greatest relative advantages, irrespective of actual cost of production. But this "law" does not make protection impossible; protection, by abolishing free exchange, introduces a new condition. The great law of supply and demand belongs to the same order. Under free enterprise value depends on supply and demand; a rise in value stimulates supply and checks demand; a fall in value checks supply and stimulates demand. But this law does not prevent the State from fixing prices if it wants to. If it confines its interference with free enterprise to the fixing of prices, the law will still operate; supply and demand will adjust themselves to the prices fixed by the State. So also with the more important case of fixing the price of labor. When the State fixes a legal minimum wage it compels no one to employ any worker whose contribution to the firm's output is worth less than the amount of the wage, it only prevents the employer from paying less to the worker whose contribution is worth it; it deliberately prefers to support in some other way those workers who cannot earn the minimum and to dispense with those industries that cannot pay it. If the State wishes, however, it can abolish freedom of enterprise in an industry altogether, in which case the law no longer holds good; in the case of military service in a conscript country, supply and demand have nothing to do with the wages of the soldier.

Some economic laws, however, are analogous to natural laws in being beyond human control; but the fact that they are unalterable does not make the organization in which we discover them unalterable. The law of diminishing returns in agriculture is immutable; but that does not prevent society, if it wishes, from substituting small for large holdings, or public for private ownership of land. The tendency in certain manufactures to decreasing cost of production as the scale of production increases operates independently of the system of control of production; hence the organization of those manufactures can change from private firm to corporation, and from corporation to trust or municipal ownership without the " law " offering any obstacle. These unalterable " laws " of economics are all based on tendencies of physical nature or human psychology; they are not principles of organization; they *condition* the economic organization, they do not *determine* it in detail. Any system that is to work must take account of them and adapt itself to them; but within these limits human ingenuity can exercise itself and devise any number of organizations. In the present economic system we discover many different principles of organization in the production and the distribution of wealth co-existing, and none of them seeking to ignore any " law." The laws of political economy prevent change in the economic organization no more than the laws of gravity, by which a stone released in space will fall, prevent us from building an arch, or the fact that the specific gravity of iron is greater than that of water prevents us from constructing an iron ship that will float.

VII

The Moralization of the Economic Organization

Controlling the Economic Process. — The helplessness of the individual in the face of the evils of the present economic system is not then due to anything " natural " or " immutable " in the system itself. The system is the creation of man, and man is responsible for it; if it were really out of his control, it would be his duty at any sacrifice of wealth to destroy it and to substitute a system he could control. The belief that the economic organization is determined by

certain natural laws and cannot be changed is a survival from the period of orthodox *laissez faire*. People often think that a thing is impossible when they do not want to try to do it, and go on saying that it is impossible after it has been tried and done. The possibility of changing the economic organization is proved by the changes that have been effected in it. The modifications introduced have been conscious attempts to bring the economic organization into conformity with our moral ideas, and much has been done to moralize the economic system. The methods adopted were the obvious methods, and can be used to carry the moralizing process further.

Possibilities of State Control. — If society discriminates between different kinds of wealth, regarding some as more important and some as less important for welfare, the State can give effect to that discrimination. It can supply the important forms itself, charging the cost in taxes, as it does education and armaments. It can " socialize consumption " by offering certain kinds of wealth for common use, again at the expense of the taxes — as it does in the case of pictures in picture galleries, recreation grounds in parks, fine architecture in public buildings. It can subsidize forms of wealth which private enterprise neglects, as classical drama and opera are subsidized on the Continent. If society discriminates between trades and occupations, to this discrimination also the State can give effect. It can protect those trades which it considers most important, as Germany has protected its steel industry and its agriculture; it can offer indirect subsidies, as most Governments do to agriculture; it can adapt its educational system to encouraging the occupations it favors, and discouraging those it regards with disfavor; it can place restrictions on the trades it regards as liable to abuse, as restrictions are placed on the sale of drink; it can withhold its protection from contracts, as it does from gambling contracts. Similarly, society can give effect to any principles it may reach on the value of different types of economic organization by prohibiting undesirable forms, as employment of children in factories is prohibited, and by imposing limits on freedom of enterprise, to prevent underpayment, overwork, and unhealthy conditions. It can diffuse control and responsibility in economic life by encouraging those occupations, like agriculture, in which small-scale enterprise is economical, by assisting experiments in coöperation, and by intrusting the regulation of conditions to trade-associations — which is the claim of syndicalism, a claim conceded to the medical profession, the legal profession, and the university teaching profession. It can promote equality, or at any rate check the growing inequality of wealth, by taxation and by laws of inheritance. Such a policy may involve some check to the growth of wealth; it may reduce the total of wealth, although it has not done so hitherto; but the aim of the community is welfare, not wealth, and if it decides that welfare can be increased at the expense of some wealth, it has the power to act on its decision. Protection, for example, usually involves a reduction in wealth; it is not therefore *necessarily* bad: whether it is bad or not depends on its other effects.

Business and Individual Conduct. — Ethical considerations cannot be excluded from economic activities. Business, although we can separate it from the rest of conduct for the purpose of study, remains a part of conduct, and as such is subject to the general rules of conduct. A morality that admitted so large an exception as business to its rules would be no morality. The helplessness of the individual, acting as an individual, in the face of the evils of the present economic system, does not absolve him of responsibility for them. He benefits by the system: the system is capable of change, and the methods by which it can be changed are known. What his individual helplessness points to is the necessity of social action, where individual action is inadequate, and his personal

responsibility is discharged only when he has coöperated in such social action.

Doubts of the need and possibility of bringing the economic organization of society into conformity with society's general conception of welfare are not the only obstacle to the attempt; a greater obstacle is the divergent conceptions of welfare that are held, not only by different churches and parties, but even within the same church or party. Ruskin felt this so strongly that he thought the primary business of political economy should be to answer the ethical question, " What is Welfare? " or " Wealth," as he called it. With that divergence we are not concerned, except to note that it is only in light of such a general conception that we can value and judge competing types of economic organization and different objects of economic activity; and to remember that while we can separate the economic and the ethical aspects of a problem for the purpose of study in the problem itself they are combined — we cannot separate them for action.

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